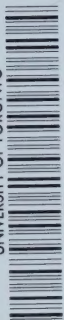


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The Journal of the
CANADIAN DENTAL ASSOCIATION

Le Journal de
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Editor-in-Chief

M. H. GARVIN, D.D.S., 314 Somerset Building, Winnipeg, Manitoba

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Rédacteur

Alcide Thibaudeau, D.D.S., A.I.D.O., 516 est, rue Sherbrooke, Montréal, Québec

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Office of Publication

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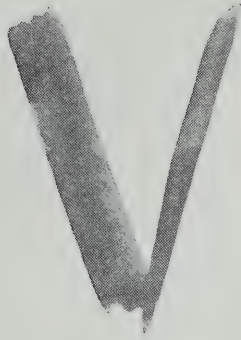
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A Prayer

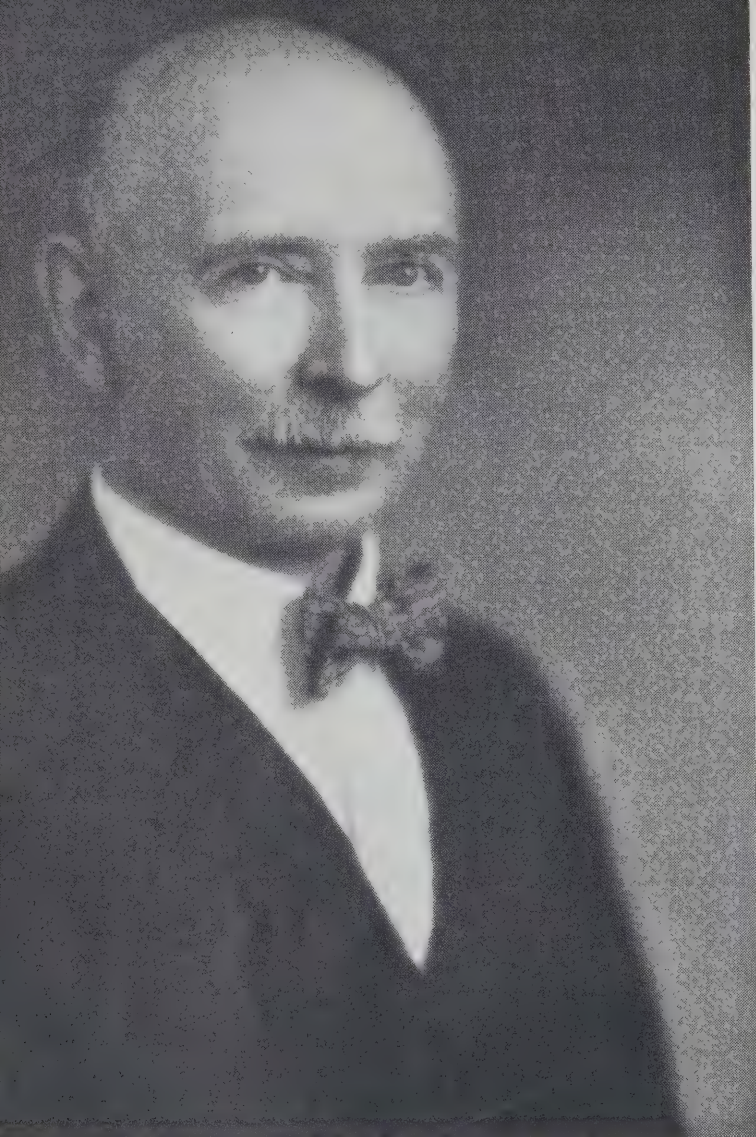
Oh, God of Hosts, we seek Thy help
In this our time of need
For deep repentance of our sins
Of selfishness and greed!

Inspire our hearts with Thy great love
For all mankind, we pray,
And grant us grace that we may live
Controlled by it each day!

Soon give us peace throughout the world,
Now torn by hate and fear!
May brotherhood our hearts enshrine
And everywhere appear!

Thus may the years, as they unfold,
Bring happiness and peace!
Thy Kingdom come on earth, we pray,
Then all discord will cease!

—Dr. W. A. Black, Toronto, Ontario.



DR. ANDREW J. McDONAGH
Distinguished Toronto Periodontist

Chairman of Research Committee of Canadian Dental Association.

Head of Dental Clinic at St. Michael's Hospital.

Representative, Canadian Dental Assoc. and Canadian Government,
1914, at Sixth International Dental Congress.

One of the Founders of the American Academy of Periodontology
and the Canadian Oral Prophylactic Assoc.

Corresponding Editor of the Appolonian.

Past President of the American Academy of Periodontology; Toronto
Dental Assoc.; Central Dental Assoc.; Canadian Section, International
Assoc. of Dental Research; and Bloor and Yonge Business Assoc.

Honorary Life Member, Ontario Dental Assoc.; Toronto Academy of
Dentistry; Bloor and Yonge Dental Bowling Assoc.

Member of Senate of University of Toronto; Dental Editors Assoc.;
Royal Canadian Institute; Rosedale Golf Club and Empire Club of
Canada.

Represents Ontario dentists on Cancer Committee of Ontario
Government.

The Journal

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VOL. 8

TORONTO, JANUARY, 1942

NO. 1

World Affairs*

by COLONEL HENRY BRECKINRIDGE, New York

FOURTEEN months ago I was in Montreal to make a broadcast. The date, August 18, 1940. It may be well to contrast the situations then and now.

August, 1940 was a dark time. The air blitz on Britain had started. It was to culminate in that terrific week of the 8th to the 15th of September when the victory of the British airmen probably will be recorded as one of the decisive battles of history. Four fifths of the B.E.F. had been evacuated from Dunkirk. The success of this evacuation also depended primarily upon the RAF and the Navy, gallantly seconded by every conceivable type of public and private ship and boat. The jackal Mussolini had thrown Italy upon the prostrate body of France. France, crushed, swiftly was falling under the complete control of Hitler through what Winston Churchill so aptly has called the "wretched Vichy French". Britain had no ally on the Continent of Europe and no apparent hope of one. The Italians were about to move toward the conquest of British Somaliland and the invasion of Egypt.

In retrospect we can say that September, 1940, was a turning point for the better. It was a desperate crisis. Most of the British mechanized equipment had been lost in France and only the outnumbered RAF and the Royal Navy

barred the invasion of the British Isles by the Nazi hordes.

It may not be too much to say that the men who designed and built the Spitfire and Hurricane saved the British Empire. The neglect by governments preceding Churchill had brought the Empire to the verge of ruin. I have the privilege of friendship with quite a number of Britons in the British Isles and as early as 1937 started discussing with them the dangers of the Nazi air development. It was obvious that air power limits and modifies the strategic effectiveness of sea power, and it seemed too bad that the Nazis should be permitted to outstrip Britain and the other free nations in the air and bring them into mortal peril. By the time of Munich, the Nazi air power had grown to such proportions that it seemed next to hopeless to overtake it in time. I do not know the details but at this juncture a decision of vast import was taken. The Spitfire and Hurricane had been designed and were put into production. It was impossible for Britain speedily to overtake Germany in all classes of combat planes, but mighty efforts were concentrated on multiplying these two supreme pursuit fighters and, though woefully short of bombers, the fighting pursuit squadrons were nevertheless barely sufficient in numbers, skill and heroic

* Address presented to the Academy of Dentistry, Toronto, Ontario, October 22, 1941.

courage to blast the Nazi vultures out of the air in such numbers as to hurl back the fell onslaught. It is my deep conviction that in those fateful days the fighter pursuit squadrons of the RAF saved not only Britain but the free civilization of the world.

Then my Country began to take action of an effective nature. Guns by the hundred, machine guns by the thousand, rifles by the hundred thousand and ammunition by the million were poured into the British Isles to help replace the equipment lost in Flanders. This American contribution of equipment was not of the best but infinitely better than none. These World War 75s, machine guns and rifles, were not the equal of the latest models, but they were of types that had done good service in freeing the world from Prussian domination in the last war and would be put to good account again, if necessary, in the hands of resolute British and Canadian soldiers awaiting the Nazi invasion.

Then came the deal involving the fifty destroyers and the bases—a good move to relieve some of the terrific strain on the far-flung British fleet stretched as it was to the breaking point, battered and knocked about here and there in countless ventures of skill and daring against the enemy—in every crisis living up to the high traditions of one of the greatest patriotic services the world has ever seen.

This last year has not been all good but much better than the one before. It saw Italy invade Greece and the legions of the rat Mussolini mauled and knocked about by the indomitable successors of the heroes of Thermopylae and Marathon. The defeated and discredited Fascisti were rescued by their Nazi overlord. Britain honoured her bond and fought heroically with Greek and Yugoslav in a bitter disheartening campaign ending in another secondary Dunkirk. It was not in vain. Toll was taken of Nazi lives

and Nazi materiel. Hitler was balked in his design to march to the Aegean by threat and treachery and had to fight; he had to pay.

Then was unloosed the air conquest of Crete showing what might have been done to England had it not been for the RAF and the Royal Navy. It was an amazing operation carried out by the Nazi with imagination, skill and fanatical courage, resisted by equal tenacity of the Imperial forces. But again Hitler had paid and every time the filthy Nazi octopus is bled in even his most remote tentacles his death is that much nearer and the life insurance of freedom the more secure.

Wavell smashed and rolled up the Italian penetration of Egypt as fast as it had come and then another Italian chestnut was snatched from the fire by a vigorous Nazi intervention that left Tobruk day by day hanging up what may become a modern world record for sieges. If the Axis forces in Libya are not swept away in battle, I hope their lines of communication will be cut and the desert heat and sand left to do their work upon them.

In this year my Country has put into effect its first peacetime conscription and a sizable army is beginning to take shape. The fruits of the foresight of our President are beginning to mature rapidly in at least one great department of defense. The battleships, cruisers, destroyers and submarines are rolling down the ways and our growing sea power is employed not exactly to the advantage of the Nazi.

The most far-reaching step taken by the United States in this year was the passage on March 11 of the Lend-Lease Act by legislative enactment of the Congress. That act writes the settled policy of the United States to resist the tyrant aggressors of the world.

We democratic nations experience a good deal of confusion in the transition

from our normal and desired life of peace to a war basis. Our difficulties are in the open and will be solved. We may be sure the dictators have their troubles which fester like a sore under the dirty bandage of censorship, propaganda and suppression. In the end I think it even more effective to expose our democratic difficulties to light and air.

We have received into our shipyards the battered warships of your imperial Navy. On more than one occasion they have been a welcome and inspiring sight to my eyes. Great battleships and lesser craft taking a rest of repair and recuperation free of annoyance from the Luft-waffe—the skilled hands of American artisans likewise giving some respite to the overtaxed men of the exposed British shipyards.

There is a constructive result in the field of human relations. It comes from these British ships in American yards. The personnel come ashore. Officers and men make friends with the rank and file of the American Navy and get somewhat acquainted with our civilian life. There is an amusing side to the subtleties of military secrecy. Hundreds of British tars wander all about American seaports with H.M.S. shown on their cap ribbons and the name of the ship blacked out. Meanwhile, thousands of motorists view from a waterfront drive a mammoth British battleship in an American Navy yard. But when we see these war-scarred veterans undergoing a successful plastic surgery in our yards, I look to the day when they or their sister ships will send the Tirpitz, the Hipper, and anything else the Nazis may have developed in the meanwhile to join the Bismarck in the bottom of the ocean.

Recently, a novel and gallant incident took place at sea which may be a portent. For the first time in history a Nazi submarine, as you know, surrendered to British aircraft and the sub was towed into

a British port. Those Nazi prisoners are fortunate to be alive and in British hands. If they ever got back to Hitler, he would shoot them for letting the submarine fall into British hands for the close examination of Nazi naval secrets. If the report is true, the Russians captured a Nazi submarine. In the last war German morale cracked first in the Navy. History may be repeating itself.

The end of May the British put down the Nazi-inspired uprising in Irak. In that same month came the fantastic flight of Hess to Scotland. Hitler put it out that Hess is crazy. Perhaps, it will turn out that he is the least crazy man of all the cut throats and murderers making up Hitler's inner circle.

Britain did not miss the bus in Syria and thus firmly blocked what might have been a hole in the strategic defense system in the area of the Eastern Mediterranean.

The 22nd of June, Hitler pounced upon Russia. It violated his hitherto successful technique of picking them off one by one. He must have made a miscalculation and concluded that a few weeks of blitz would destroy the Russian army. It may turn out that Hitler cut his throat on June 22. Assuredly, he has cut it, if the rest of his enemies, including my own Country, take advantage of the strategic opportunity afforded for his destruction. Always Russia had baffled my understanding. Its life seems to be one perpetual agony and nothing about any system of government that it has ever tried has the slightest attraction for my individual tastes. But somehow or other the net result of the impact of Russia in world affairs has been to the advantage of the United States and strangely enough on one occasion, certainly, and now for perhaps a second time, has saved Western civilization of which it has been a very uncertain part. In the last World War, the Russian onslaught against East-

ern Germany saved the allies at the first Marne. The Germans made a critical error of withdrawing troops from the Western front to stem the Russian invasion and Joffre was enabled to win one of the decisive battles of history. At the time of our Civil War, when it seemed that the British government was on the point of recognizing the Southern Confederacy, Russian squadrons turned up in New York and San Francisco. Incidentally, we did not inquire as to the liberal nature of the domestic institutions of the then ruling Czar nor am I concerned at this moment with any ideological differences between the government of the Soviet and the American Constitution. It is good enough for me that Hitler is our enemy and Russia is fighting him. No American ever felt much concern from the fact that fifty-six miles across Bering Strait lies the Russian mainland. Any American with common sense would view with alarm the appearance of Hitler's legions on that shore. So let us hope the Russian army will cost the Nazi legions dear, and let us also hope that the other enemies of Hitler will take full advantage of a most fortunate and unforeseeable opportunity.

The RAF is doing just that. Nothing is more ludicrous than the squealing of the Nazis under the RAF hammer blows on Berlin. These jungle beasts who have slaughtered innocent women and children in the icy waters of the Atlantic can't take it. These treacherous marplots who have sent forth the vultures of the Luftwaffe to the wholesale crucifixion of civilian populations quail before the retributive justice that now is coming home to them. Perhaps the most terrible thing the Nazi beast has done to humanity is to make it merciless, causing hundreds of millions of people with burning hatred to will a pitiless vengeance on the perpetrators of an innumerable series of bloody crimes. Unless the German hordes can conquer all the rest of free mankind,

the German people themselves must liquidate the ferocious leadership they have accepted or suffer one day the most awful retribution ever visited upon a modern people.

On last July 7 on the invitation of the government of Iceland, the United States forces occupied that great potential defense bastion of the North Atlantic. It was a move of fundamental strategic importance and will prove a vital factor in the final destruction of the Nazis.

On August 14, came the Eight-Point Joint Declaration between the President of the United States and the Prime Minister of Great Britain. Having no inside information, it was hard for me to believe that the meeting was taking place though everyone else in the world seemed to be sure of it. It seemed too perilous an act for Mr. Churchill to absent himself from Great Britain and risk the perils of the ocean, but one peril more or less does not count with this irrepressible, indomitable man to whom the British Commonwealth turns for leadership in the most dire crisis of its history. Or perhaps as a real seadog, he may harbour the sentiment expressed by a young kinsman of mine who commanded an American destroyer. We were discussing the arrival of one of your great ships in a certain American yard. Someone stated with amazement the great length of time this ship had been away from port serving in the various theatres of war without overhauling. The young American naval officer commented, "That's nothing. They probably feel much safer at sea."

On the night of Thursday, September 11, President Roosevelt made his great "shoot-at-sight" speech. He gave the only possible true American answer to Hitler's attack upon the American doctrine of Freedom of the Seas which from the beginning of our history has been a keystone of our policy and in defense of which we have fought several wars.

It has been a long year fraught with

danger and full of toil. It has seen consuming fires of Nazi barbarism spread over most of the Continent of Europe. But on the whole it has been a year of mighty organization of the forces of freedom that will spell Hitler's doom. The epic salvage operation from Dunkirk, the indescribable skill and valour of the RAF in the Battle of Britain, the staying power of the plain people of the British Isles, the growing military power of the sister nations of the British Commonwealth, the incomparable leadership of Churchill, have saved the situation to give priceless time to organize the vast latent powers of Hitler's enemies. But if our will does not weaken or courage fail, Hitler and his minions will be destroyed.

Somewhere along the path of human evolution it must be demonstrated that there is no personal profit in such careers as Hitler's. There must develop a common law of the world which not only makes such conduct unprofitable but visits condign punishment upon the culprit.

Hitler's career is strewn with the violation of every law of God and man. His perfidies have become nearly too numerous to remember; his crimes too heinous to describe.

It may be argued that the Community of civilization has no right to bring him to book for the murder of his fellow Germans, for the persecution of religion within the borders of his own Country, for the bestial suppression of helpless and innocent minorities of the Third Reich. But at the Bar of international justice he can be brought to book and condemned to death for his multitude of international treacheries and the violation of international law.

On one count alone, with complete justice, he can be sent to the gallows. My own Country entered the last war largely to maintain its rights under international law upon the sea and to punish Germany's violation of those rights. Nothing was better established in international law

than that innocent civilians might not legally be slaughtered at sea. The right of Search and Seizure, the right of capture of a ship with its contraband was clear. But provision must be made for the safety of civilians, crews and passengers. In 1930, this settled principle of international law was embodied in specific treaty which was ratified by the Government of the Third Reich only after Hitler came to power. Since then he has torn up this treaty along with every other commitment of his plighted word and, in defiance of every principle of law and humanity, has embarked upon the wholesale slaughter of civilians upon the high seas.

The weakness of international law has been the lack of sanctions, the absence of the machinery to enforce its mandates. Even now from a strictly legal standpoint it may logically be argued that there is no legal machinery for bringing Hitler to trial for his many crimes against international law; no provision for a Court to try him and no legal basis for his execution if found guilty. The world is confronted with the same type of quandary that has existed many times in the evolution of law. If there is a vacuum in the method of procedure, the time and occasion have come to fill it and to implement humanity's determination that its crucifixion by bloodthirsty and reckless conquerors shall not go unpunished. Hitler never should be permitted to retire and chop wood at Doorn.

Somewhere on the turning pages of history it must be written once and for all that international crime and conquest bring personal disaster to those who embark upon them. So I propose that when the forces of freedom have conquered and destroyed the Nazi beast, Adolf Hitler, and his co-conspirators in crime, they be captured, tried and properly executed on the gallows. It would be even better if as the great Churchill suggested, the German people rise and tear to pieces

these felons who have degraded German civilization and used the German people as an instrument for the annihilation of civilized humanity. But if this does not happen, then let others do the miserable job for them as a lesson for all the future. Such a course would serve a double purpose. It would demonstrate that the individual rulers of nations may not escape the consequences of the violation of international justice. And it might serve to satisfy the desire for a just vengeance upon the leaders who have deluded the German people by censorship, incited them to violence by insidious, subtle and incessant propaganda, and led them into a career of wholesale murder and destruction. The execution of the leaders might spare the German people from some of the consequences of falling into such hands and following the devilish plans of the fiends who make up the leadership of Hitler's Reich.

It is not useful to keep recounting the manifold mistakes of the free peoples during the last two decades and more. This is not the appropriate occasion for analysis of what might have been if my Country had not abandoned the League of Nations. But as a member of the A.E.F. my mind cannot escape some of the indelible impressions of that past venture. Though more than ready to quit and go home, I recall vividly my feeling of dismay and foreboding when the Armistice went into effect on November 11, 1918. There is and ever has been a natural and profound reluctance in the people of the United States to embark upon war. But also there has been the tradition that once the sword is unsheathed, they fight to the unconditional surrender of the enemy. General Pershing advised the continuation of the battle until the opposition of the enemy had completely disintegrated and the forces of freedom, by their presence, in conquered Berlin, should bring home to

the people of the Hohenzollern's militarized realm that they had been definitely and completely defeated on the field of battle. Nine million men had died to thwart the Hohenzollern's lust for world conquest. The Hohenzollern armies were defeated and ripe for destruction. The terrible job was not really completed which may be one of the many facts laying the foundation for Germany's willingness to try it a second time after less than a generation had passed.

Some virus has got into the people in Germany. They seem peculiarly susceptible to being meshed as cogs in a ruthless and mighty military machine, there to be embarked on the stormy and bloody sea of wars of conquest. At the beginning of the last war I was sent to Europe on a mission. As I made a hasty journey from one capital to another, ending up in Paris just before the first battle of the Marne, my mind received impressions which will not fade as long as the function of memory remains. Particularly, do I recall the long talk in Berlin with Albert Ballin the great merchant shipping prince and intimate business advisor of the Kaiser. Truculent and megalomaniac as was William II, he never descended to the depths of degradation of this homicidal maniac, Adolf Hitler. Albert Ballin was a Jew who started his business life as a shipping clerk in New York City. When I spoke with him the gigantic masses of fifteen million soldiers had not yet clashed with their full impact. It seemed possible to me that Germany, in backing Austria's demarché on Serbia after the murder of the Archduke, did not believe Europe would fight and might be glad to stop before it was too late. I asked Ballin what would happen if the President of the United States suggested a fourteen-day Armistice during which time no soldier in Europe should advance another foot. The good faith of compliance could be observed by

countless diplomats and consular agents of the then neutral powers. In twenty-four hours representatives of the belligerents could be assembled either in The Hague or in Berne to negotiate before the real holocaust should get under way. Albert Ballin paled; tears came to his eyes and he said, "The Kaiser could not do that if he would. The hand that holds the sword rules Germany. The military men deliberately have embarked upon this enterprise; they foresee its successful conclusion and will pursue it to the end." I feel free to recall this incident because long since Albert Ballin ceased to have the need of any human protection. He died by his own hand not long after the close of the last war. At least, he escaped one of Hitler's concentration camps.

But what are we to do with the people who seemingly have become the tools of the architects of a terrible militarism and at short intervals of time and history willingly and even, exultantly sally forth to the shambles of more and more destructive war? Some fanatics among us go so far as to say there is no other solution than the extermination of this people; that it is a war of annihilation; that it is either the destruction of Hitler and his people or the destruction of all other free humanity everywhere—if not the destruction, the enslavement which is worse than death.

Can we separate the German people from their bloodthirsty and dastardly leaders and beckon them to a decent co-operation with the other members of the family of nations in a resumption of the march of freedom and civilization? After the terrible question of our power to survive the present onslaught of the tyrants, this is the great question confronting humanity.

Wisely, and I think truly, it has been said that you cannot indict a whole nation. To people fighting for their lives

in a battle for survival which still hangs in the balance, this statement well may fall upon the ear as banal, empty, unwelcome and irritating words. Nevertheless, the militaristic bloodlust rampant in Germany since 1870 appalls and baffles the civilized mind. As long as there was any freedom of expression in Germany countless noble voices were raised in opposition. But the truculent jingo always has carried the day. The other side of the picture is that millions of Germans have left the fatherland, gone out to free countries, readily and rapidly integrating themselves into the free life of democratic nations and have stood for freedom when the challenge came. In the last war one of our finest American divisions was the Thirty-second, recruited from Michigan and Wisconsin. At least half its soldiers spoke the German language. By a series of magnificent assaults, it broke the Hindenburg line in one portion of the American sector. Being relieved from the front line after heavy losses, these soldiers would stop at a prison pen and amaze the German prisoners by conversing with them in the German language. More than once the German prisoners would say, "Why are you Germans fighting against the Kaiser?" The reply was automatic. "Germans, Hell! We are Americans." The great mass of men and women of German blood in the United States are just as loyal Americans as any other and one day Hitler may find this out to his sorrow. Not only is there no ground for fear of the loyalty of the American citizens of German blood who have been with us a generation or more, but there are thousands of Germans come to our shores in the last decade who are the implacable foes of Hitler's Nazidom, who look upon it as a degradation of all that is good in German life and who are willing to risk their lives in its destruction, convinced that it is the only means of liberation for the German people.

Let us hope that this type of German some day will predominate in Germany's leadership because all the evidence of recent history conclusively proves there are only two alternative solutions for the peace of the world—the extermination or reformation of the people of Germany.

Meanwhile, Unter den Linden, Berlin's historic boulevard, is one and a quarter miles in length. It has one hundred fifty lamp posts. If they are still standing when the forces of freedom have conquered the Nazi beast, they might serve a useful purpose in ending for Adolf Hitler and his partners, their bloody careers of crime, slaughter and oppression.

There are nearly as many English-speaking people in the British Commonwealth of Nations as there are Germans in Germany. There are twice as many Russians as there are Germans. There are fifty million more Americans than there are Germans. I suppose we ought

not to overlook the forty million Italians. I nearly forgot them, not from any lack of respect for the Italian people but from disgust that they have become the rather ineffectual tool of the paltry Mussolini in betraying everything decent in Italy's history. But what I am driving at is that the enemies of Hitler outnumber him four to one, if they bring their power in concentrated and united attack upon him. They outnumber him four to one in man power and at least four to one in natural resources. It is nearly unthinkable that he can defeat them despite the forced labour of a hundred million sullen and rebellious slaves writhing under the Nazi heel. This is not the place for me to debate the policy of the United States, but I shall risk the statement that the fools among our people will not prevail in their efforts to prevent the United States from doing its part to insure the doom of Hitler.

He Found Nothing

Once upon a time a wise mother found her young son wandering around the house. "What are you looking for?" she inquired. "Nothing," replied the boy. "Well, you'll find it in the box where the candy WAS." Whereupon the lad looked in the box and he found—NOTHING—the candy was gone.

Aren't we reminded a lot of ourselves by this little story? We would find the worth-while things of life, but by the time we realize where to look for them — the candy is often gone.

After years of living, we creatures called man, learn a lot of things. We learn, for instance, that health is our greatest asset—but often, not until health has been lost because of improper living habits. We learn the need for reading and studying in order to cultivate our minds—but many times only after sight has been impaired, preventing the practice of that which we have come to consider so important.

And on and on you can go, naming the things that man learns through life experiences—only to find it too late to do anything about it. In other words, the candy is gone by the time the box is found.

Doesn't it behoove every young person, then, to study the mistakes of others and through learning of their errors, take heed lest they, too, fail to find the candy of life?

The Houston Meeting of the American Academy of Periodontology

by CELIA RICH, D.D.S., Nashville, Tennessee, U.S.A.

THE twenty-eighth annual meeting of the American Academy of Periodontology took place in Houston Texas October 23 to 25 with a fine, almost record, attendance. Houston is far off the beaten track for most of us, but we all felt repaid for the inconvenience by the warm and hearty welcome we received and by the excellence of the program.

Nothing in the proceedings was more interesting than the Committee Reports. The Nomenclature Committee reported that the periodontal nomenclature recommended at the 1940 meeting and accepted, albeit after heated discussion, has called forth much favourable comment. The Southern Academy of Periodontology adopted it unanimously as its official nomenclature; the differences with the "Vienna Group" have been practically ironed out; many of the schools have adopted it and Dr. Kurt Thoma (of Harvard) held up the publication of his new "Oral Pathology" in order to correct the terminology to be in conformity with that of the Academy.

The Publication Committee recommended the issuance of four numbers of the Journal per annum as soon as the additional cost could be financed. The suggestion that the needed revenue be obtained through advertisements was not approved, and an increase in dues for the purpose is being seriously considered.

The Committee on Specialization reported that a gratifying number of Periodontists have applied for certification and a goodly number have been accepted.

The Personal Relations Report has come to be one of the most enjoyable of the meeting. Letters and messages from

members throughout the country are read and many intimate and often amusing and interesting items are given.

Of very considerable importance was the report of a Sub-Committee of the Scientific Investigation Committee. Under the leadership of Dickson Bell of San Francisco a plan has been worked out in which it is hoped all Academy members will take part. The Committee has developed a form for recording case histories along with suggestions for preparing same which will be of inestimable clinical statistical value if a large enough number co-operate in the plan. The record includes the following:

- I. Summary of Dental History: (Preparation of this part of the record is simplified by diagrams of the teeth with horizontal lines 1mm. apart on which to indicate location and depth of pockets and their general contour.
- II. Clinical-Anatomical Findings: Colour, trophic changes, infective symptoms, bifurcation involvements, etc.
- III. Clinical-Functional Findings: Occlusion, anomaly of position, mobility, etc.
- IV. Roentgenographic Findings:
- V. Dietary Summary and Recommendations:
- VI. Diagnosis:
- VII. Prognosis:
- VIII. Therapy:
- IX. Epicrisis:
 - a. Results of Therapy.
 - b. Photographs of case before and after treatment.

The desirability of photographing the patient's mouth at the commencement and completion of treatment was stressed in the President's address also. Dr.

Hirschfeld often takes double pictures to view in the stereoscope. He recommended that we all try his plan, that is, make a hobby as well as a vocation of the practice of dentistry.

Dr. Walter Leabo's paper was based on his many years of experience and observation and his "Principles of Treatment" are thus well worth considering. His attitude is most optimistic. First in importance is correct diagnosis and prognosis. Ideal, zero depth of pocket is often unattainable but restoration to health and function is possible in the great majority of cases by careful skilful sub-gingival curettage. He finds visual access unnecessary when a fine tactile sense has been developed, but he cautioned against damage to the epithelial attachment beyond the actual pocket depth. Roentgenograms are important especially for comparison with the clinical findings. Excessive unattached soft tissue may be removed surgically.

Dr. William Wainwright presented the results of some recent studies at the University of California on salivary flow and composition in relation to caries. Neither rate of flow nor proportion of calcium and phosphorus indicated any significant relationship to the presence or absence of caries. So far, the findings of the San Francisco group under Becks seem to confirm Bunting's theory of the extreme, and probably unique importance of carbohydrate intake and bacillus acidophilus count as factors in caries production.

Another presentation from the same school was "The Effects of Vitamin B Filtrate Factor on Oral Tissues of Animals" by Hermann Becks (presented by Dr. Wm. Ryder).

According to these investigators the relationship of the B Filtrate factor to oral conditions "offers new hope in vitamin therapy". They deprived animals of the B Filtrate and malformation and rampant caries resulted and also absence of teeth. Much of the bone was replaced by fat tissues, and gingivitis was obvious, both clinically and histologically.

With deprivation of the B Filtrate and nicotinic acid, bone and gingival degeneration occurred. "Osteoclastic activity dominates the picture" but there are inflammatory conditions evident throughout the periodontium clinically, radiographically and microscopically. Convincing pictures showed marked osteoclasia and, in young animals enlarged capillaries and haemorrhages in the bone substance of the odontoblastic layer. Other slides graphically compared roentgenograms with the histological findings. Becks concludes that the B Filtrate and nicotinic acid are essential to periodontal integrity.

Two fine histology presentations interested your reporter particularly. These were given by two European scientists whom we are fortunate in having in the United States. Dr. B. Gottlieb is now connected with Baylor University in Dallas, and Dr. E. Kotanyi with the Texas Dental College in Houston.

Dr. Gottlieb's paper was entitled "Biology of Cementum." He pointed out the paramount importance of cementum in the fixation of teeth and also showed that the greater the function of the tooth the greater was the need of it. In the herbivora we find cementum covering the enamel and giving function throughout the organ. There is a constant tendency of epithelium to proliferate and this tendency is resisted by new layers of highly vital cementum which prevent the epithelial down-growth from being excessive. It is only through the medium of fresh cementum that the attachment of periodontal fibres to the tooth can be maintained, and function can be restored to resorbed areas only by deposition of new cementum. The periodontal fibres may appear to be only superficially attached to the cementum but they probably run through its entire thickness being calcified in the deeper layers. They are deeply attached in the herbivora and more superficially in the carnivora.

New and uncalcified fibres are more resistant to resorption, hence the importance of the continuous formation of fresh

cementum. This protective action (against resorption) of newly forming cementum is comparable to the protective action of epithelium on sub-jacent structures. In traumatic experiments only the periodontium is resorbed when tissues are young, but in older, highly calcified structures the cementum of the root itself resorbs. "Nature is usually right and research means to listen and observe her work and see how she keeps the right road." A worthwhile piece of research would be to try to find how and why nature takes care of continuous cementum deposition.

Dr. Kotanyi's subject was "Clinical Histology of the Periodontium". His slides demonstrated the wide difference in all elements of the periodontium in functioning as compared with non-functioning teeth. It is a remarkable paradox that Hertwig's sheath, which is epithelial, still is the agent which inaugurates and establishes the form of dentine and cementum, both connective tissues. He explained the presence of the epithelial Rests of Malassez as remnants of the original enamel organ, or, as he called it, the "Tooth Organ". These rests are of great clinical and pathological importance. Being misplaced and in a way foreign cells, they may originate cysts or even cancers or other neoplasms.

Dr. Kotanyi is evidently a firm believer in the theory or doctrine of teleology, that is to say, "purposeful design" in nature, and he brought out the application of this theory in the embryology and histology of teeth.

The informal question and answer discussions which are possible when a very small group stands around the screen and has one fact after another pointed out by one who knows, are things which can only be appreciated by being privileged to be among those present.

Among the clinics were the following: "Optimum Occlusion" by J. C. Westbrook, Jr. He grinds and reshapes the teeth in cases of potential trauma even when the dentures would ordinarily be considered perfect. His object is to re-

duce the contact areas in the occlusal relationship.

W. A. Beatty's clinic was also largely on occlusion and he advocated the use of abrasive paste in mild cases of trauma.

W. B. Cockroft considers the early extraction of third molars, especially when impacted, a worthwhile prophylactic measure. Irritation and pressure are thereby avoided and periodontal pathology prevented.

Three clinics by Drs. Raymond Garvey, W. J. Healey, and Harold Leonard dealt with cases of extensive dental reconstruction, and all three emphasized the importance of maintaining the integrity of the supporting structures.

Rowe Smith's kodachrome photographs of periodontal pathology attracted much attention and the value of his presentation was enhanced by corresponding roentgenograms and casts.

A section of the program was devoted to brief presentations of Incidents of Office Practice.

Robert Dement reported a case in which he converted a trifurcation in a root-filled maxillary molar into a bifurcation by the amputation of one root. It was then possible to maintain a hygienic condition around an otherwise doomed tooth.

Rowe Smith's case was one of acute Vincent's infection which responded promptly to oxygen therapy alone.

Thielen showed a case with good results, roentgenographically eight years after surgical treatment.

Dean Creamer's case report was particularly interesting. The patient reported with what at first glance appeared to be multiple lateral abscesses, but what evidently was an osteomyelitis since it eventuated in sequestra being thrown off. Healing took place after a prolonged period of drainage with the patient himself acting as chief surgeon.

This report fitted in nicely with Dr. Orban's "Differential Diagnosis between Lateral Abscess and Osteomyelitis." The main point brought out by Orban was that bone is never exposed in ordinary perio-

dontal disease. "When you can touch bone the case is not pyorrhea"; whenever there is necrotic bone you have osteomyelitis.

Two of the "incidents" especially emphasized the importance of co-operation between dentist and physician and pathologist. Dr. Virgil Loeb's case of "Acute Monocytic Leukemia with Pronounced Gingival Involvement", and Dr. J. B. Freedlands case (presented by Dr. Sinclair) "Padgett's Disease of the Mandible" (Osteitis Deformans)."

Dr. Ray Gills case was a unique one of Vincent's infection on the buttocks of an infant.

The round table topics were interesting and the reports, though brief, were presented in serious and telling form; but there is space in this "Report" for little more than the titles and names of discussion leaders.

Table 1. Russell A. Sand, "Is Periodontoclasia More the Result of Than the Cause of Systemic Disease".

Table 2. R. Gordon Agnew, "The Role of Nutrition in the Treatment and Prevention of Periodontal Disease".

Table 3. Jack Sinclair, "What Results can the Periodontist Expect from Thyroid Medication to Patients with Hypothyroidism".

Table 4. J. O. Hall, "Vincent's Infection Complication in Periodontoclasia and Early Treatment of Same".

Table 5. R. Dean Creamer, "Drugs in Periodontal Therapy".

Table 6. Justin D. Towner, "Indication for Types of Operative Procedure in Periodontal Treatment".

Table 7. Robert L. Dement, "Instruction for Proper Home Care in Periodontal Cases".

Table 8. W. F. Andes, "The Relative Value of Mouth Rehabilitation and Periodontal Treatment in Mutilated Mouths".

Table 9. Dickson Bell, "Suggestions for Promoting Research in Periodontology, and the Possibility of Research Grants to Accredited Institutions or Individuals".

Table 10. Ladies' Group. Charming Mrs. Russell Sand speaking for the ladies read a delightful original poem filled with clever references to Academy Activities.

Two significant papers were presented on subjects related directly to the general health.

George S. McReynolds, M.D., of Galveston gave a most comprehensive discussion on "Oral Manifestations of Vitamin Deficiencies". The subject is so broad and such a wealth of important material was presented that it is to be hoped that the paper will be published in the near future, that even we, who heard it, may have the opportunity of digesting it.

Dr. Thomas J. Cook's admirable presentation was on "Diseases of the Oral Mucosa", and it was illustrated with amazing coloured motion pictures.

Dr. Gordon Agnew, one of our most valued British members, gave a talk which, of itself, made the 1941 meeting worthwhile.

His subject was to have been "A Periodontist in Eastern Asia", but I am sure that no one regretted it when he changed, with apologies, to the Relationship of East and West. The frankness of his recital of the wrongs inflicted on the East by the West was amazing. The West, he says, has created the problem in the East. Dr. Agnew reviewed Chinese History and the disgraceful part England and America have played in it from the "Opium Tea Party" on down through the Manchuko affair, and further. I am sure that everyone present blushed with shame as I did at his recital.

The flight of millions of Chinese into the western part of the country, already crowded with its teeming millions, in the face of Japanese invasion has created a new problem of nutrition, housing, and hygiene for China.

The courage and determination of these people is beyond belief. Where schools have been bombed the students

have carried on in caves, and when driven from them they have retreated on foot with their books under their arms farther and farther west and re-established the schools. In some instances a harassed school has been moved three or four times, a distance of hundreds of miles, its students literally carrying the institution with them, and on foot.

In the face of her ordeal China is planning a three-year campaign to blot out illiteracy among her people and is calling for 17,000 teachers to carry out her program.

China is grateful to the western powers for their help but still views them with distrust, wondering whether their Democ-

racy is really "an ideal or just a slogan".

Dr. Agnew says that we, of the west, can overcome this distrust now by giving all possible help in moral support, food supplies and in every possible way during the present crisis.

Dr. Agnew's delivery, his fine enunciation and his earnestness added much to this splendid and timely presentation.

This account of the 1941 Academy meeting would not be complete without mention of the delightful banquet which was the main social event and was held at the Houston Country Club, and the delightfully sociable tea which closed the convention Saturday afternoon.

Chairside Dental Health Education

by IRVIN H. ANTE, D.D.S., Toronto, Ontario

W. G. HOWARD GRITTEN, M.P., of England, states that: "If we were to spend on the health of the nation, and particularly on the young, one quarter of what we are now spending on national health insurance, there would be little need for such insurance at a distant date".

In the United States, Wood Clapp, D.D.S., claims that there are over fifty million people in America who, if properly taught by the dental profession, could afford a fair quality and quantity of dental service at fees suited to their financial level. They are in a position to pay on some equitable instalment plan.

The crux of the matter is that dental service must be explained to all classes of people so that its benefits will be appreciated. The value of prophylaxis, periodical examinations, radiograms, restorations, etc. must be shown to, and understood by, the patient.

It has been found that seventy percent of the public can afford simple dentistry,

and ten percent can afford the best, and yet only twenty percent of the public receives systematic and adequate dental service. What of the other sixty percent of the people who can afford proper dental service and yet do not receive it.

One reason, in people generally, is ignorance of the true condition of their dental health. Another, is lack of knowledge of the serious local and systemic results caused by neglect. Still another, is the fear of pain; they expect to be made to suffer from dental operations. And still another, is the fact that people would rather spend money on luxuries than on health service. Most of these objections may be eliminated by the dentist if he is only awake to his professional responsibility.

Dentists owe it to humanity to make known the value of their services. They must tell people about dental health and the need of it. If it is practised efficiently and diligently by the profession, dental

health service education can be one of the most effective methods by which the eyes of the layman, literally and figuratively, may be opened to the facts which he should know about the teeth in relation to the health and beauty of the body.

Dental health service is the cure for dental ignorance in the public. It is the dentist's solution to his professional problems of the day. Patients must be imbued with the ideals of preventive dentistry and they must be prepared to meet future dental difficulties for themselves and for their children. They must be introduced to modern concepts of dental hygiene and taught the value of restorative dentistry.

Dental health service has two aspects: *first*, the educating of the public to the value of dental care; and *second*, the actual dental work performed for the patient, be it preventive, emergency or restorative treatment. We take it for granted that graduated and licensed dental operators know how to do and can do efficient work. The real problem is the education of the public to the need and appreciation of that service to the point of desiring it.

The education of the public is nothing more than that of presenting facts so intelligently that the man to whom you are talking sees the point which you are trying to make. He must realize it beyond the question of a doubt. To convince means to tell your story so that it will come within the comprehension of the patient and hence it must be lucidly and simply presented. The education of the public is our professional obligation. And upon the skill with which you present your education story depends the success of your practice. For, if the advantages to be derived from the suggested service are appreciated by the patient and his interest caught and held, mutual understanding will be achieved and mutual satisfaction will be realized. Therefore, it is our duty, as health servants, to devote our efforts

to the great services of increasing dental effectiveness and cutting down tooth disease and eliminating systemic ailments. The only way to remedy this condition is to promote general public interest in regular dental care. By perseverance, and by keeping our own minds free from any defeatist complexes, we can perform this service for humanity.

The time to teach dental knowledge is when the patient is in the chair. At that time he is interested in the health of his teeth or he would not have come to you. If you tell him and show him your story, it will inspire his confidence. Above all things, you have to create a desire for dental service before you can do the needed work and before the public can receive the advantages of your training and skill. You must tell your patient in simple words what is essential to his welfare. If you do this adequately you will build up a desire in him to obtain the service, and he will not only accept your judgment on his case but be grateful to you, providing you carry out in a practical way the suggestions you have made.

Such an educational service demands a great many qualities in the dental operator—all of which qualities most dentists possess or can develop. As a matter of fact, properly conducted, genuine education is simply telling a story—the story you know best, in such a way that your patient will understand. It is my belief, furthermore, that no matter what a man's vocation or avocation, the nature of his success through life, from the cradle to the grave, is largely dependent upon his ability to influence and educate others.

We, as dentists, must keep constantly on the move and we must study and know our public, for today's rapidly changing picture demands that we keep posted on up-to-the-minute developments. Whether we like it or not, we must prepare for a different tomorrow while still adequately

taking care of today. We simply cannot go along confining our energy to the problems of the minute, for if we do, there may be no tomorrow for us in a professional way. Public dental health executives today, as always, must get to the whys of everything. Each of us must go around from morning till night asking "why" to every problem which confronts us and being able to answer at least some of the "whys" our patients ask us.

In both medicine and dentistry, the preventive rather than the emergency aspect of the sciences is being stressed today. This is placing the accent in the right place. There will always be emergency cases in both medicine and dentistry, but cases of incipient disease may be arrested by timely treatment and before any great damage has been done to the health of the patient. Preventive medicine and preventive dentistry are two of the most important kinds of insurance man can buy—yet people generally do not seem to realize that truth. It is the task of the physician and dentist, respectively, to make them realize it. This can be done by teaching the value of preventive treatment in specific cases. For example, dental examinations at set intervals is necessary for everyone. Teach your patients that and you have taken one step ahead.

Finally, your success or failure rests on your ability to sell needed service—and this is a constructive service to humanity as well as a necessity to yourself. Start

now to put together an intelligent educational story showing the importance of dentistry to humanity. Make your story logical, connected and understandable. Become thoroughly conversant with your subject and yet do not be parrot-like in its presentation.

In dental practice, if we plan our procedure and our approach carefully we can gain the interest of the prospective patient. If we make the right kind of approach and give convincing explanations and demonstrations we will be able to prove our case and procure action from the patient. The reception of the patient, your professional approach, the taking of the case history, the diagnosis, prognosis, and offer of professional service and the statement of fee are all inseparable units in chairside dental health education.

The dentist who is a constructive educator thinks, talks, acts, in terms of benefit to the patient. He does not think in terms of the amount of money he will make. He thinks in the interest of the patient whom he is trying to serve and if he acquires the habit of doing his work well, teaching his patients the value of that service, he will be among the highly successful group of dental operators.

"Keep a man healthy and his desires are for success:

Make a man successful and he will become ethical."

Medical Arts Building.

Conventions

MIDWINTER MEETING OF THE CHICAGO DENTAL SOCIETY, PALMER HOUSE, CHICAGO, FEBRUARY 23-26, 1942.

11TH ANNUAL MEETING OF THE ONTARIO DENTAL NURSES' AND ASSISTANTS' ASSOCIATION, ROYAL YORK HOTEL, TORONTO, MAY 18-21, 1942.

My only regret at getting old is that I sometimes begin to feel I have got a suspicion that I am beginning to know something about something. I doubt if it is true.—Earl Baldwin, per Letter-Mag.

Conservative Dental Surgery

by GEORGE A. MORGAN, D.D.S., Toronto, Ontario

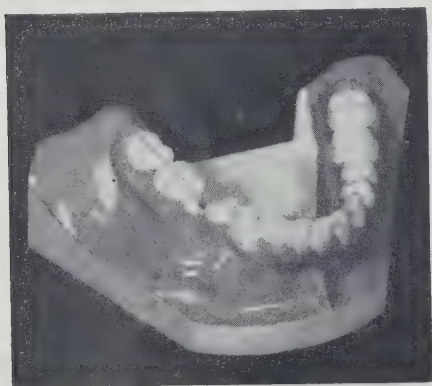
THE purpose of this paper is to direct attention to a few of the phases of Dental Surgery in which conservatism has proved to be of special benefit to the patient.

The first essential in all dental surgery should be a well taken, intelligently interpreted roentgenogram of the area to be operated upon. In the interpretation of dental roentgenograms one should be careful to eliminate artefacts, film deficiencies in exposure and processing and keep constantly in mind, normal anatomical varia-

tions which may be observed in the particular area under surveillance.

Probably, the most frequently observed large area of radiolucence is that of the dental cyst. In the maxilla they are most commonly observed originating from the lateral tooth, they tend to backward extension and frequently, due to continued pressure atrophy, appear to involve cuspid, bicuspid and molar teeth, when in reality, the outer wall of the cystic membrane lies behind these aforementioned teeth.

Roentgenograms revealing large radiolucent areas, apparently cystic in character and which appear to involve several teeth should be carefully studied pre-operatively. The correct procedure is to first examine the roentgenogram carefully, curette the cyst beginning at the point of origin or at some point where bone structure has been noticeably weakened or penetrated, remove the cyst and then the teeth found to be actually involved. This method will often result in the saving of many teeth, whereas the often attempted procedure of first removing all teeth which are suspected to be in cystic contact and this suspicion founded only on roentgenographic evidence, frequently results in the needless sacrifice of many sound, functionally useful teeth.



CASE I

Figure 1

Roentgenograph illustrating large dental cyst extending from the distal root of the mandibular left first molar to the distal of the mandibular left incisor.

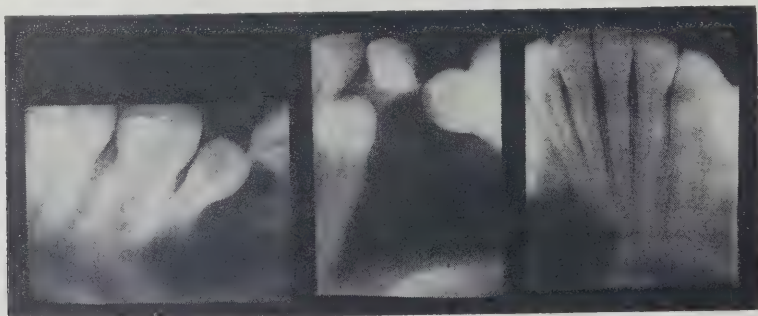
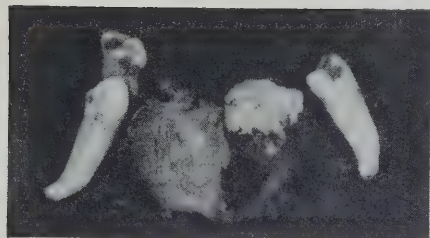


Figure 2

CASE I

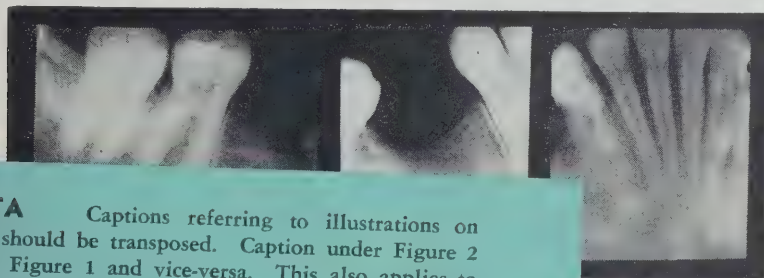
Model illustrating clinical appearance of cyst—note extent of buccal involvement.



CASE I
Contents of pathological area with teeth removed.

of the impacted maxillary cuspid. These cases present in teen age patients a problem worthy of more surgical caution than they have hitherto received. Many such cuspids are removed because of the belief that they cannot be brought to their normal space in the arch by means of modern orthodontic methods.

It is truly remarkable how an impacted cuspid even though lying horizontal in the palate may be moved down and out



ERRATA Captions referring to illustrations on Page 18 should be transposed. Caption under Figure 2 refers to Figure 1 and vice-versa. This also applies to Figures 4 and 5 on Page 19.

CASE I—A patient, female, age fourteen presents with considerable swelling in the left mandible, split bicuspid and retention of the deciduous second molar (Fig. I). History of slight pain in this area of only three weeks duration. Dental roentgenograms revealed a large pathological area apparently involving the mandibular first molar, bicuspid, cuspid, lateral and central incisor (Fig. II).

The size of the cyst removed and the number of teeth actually involved is illustrated in Fig. III. At time of operation it was found that the cystic cavity lay lingual to the mandibular molar and buccal to the mandibular anteriors, thus it was felt that these teeth should not be sacrificed. That prognosis was correct, as is born out by Figs. IV and V which illustrate clinically and roentgenographically the case two years after operation.

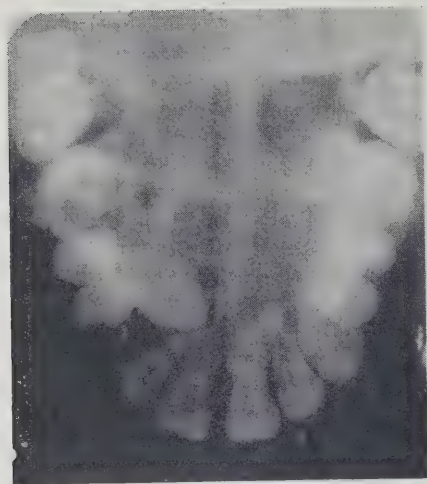
A second type of case which should have careful pre-operative thought is that

post-operatively.



CASE I
Figure 5
Roentgenograph two years after cyst removed illustrating complete filling in of bone.

to its normal position by the removal of the palatal coronal investing bone after which an impression is taken and a cap casting or wire hooked around the tooth until such time as it is sufficiently ex-



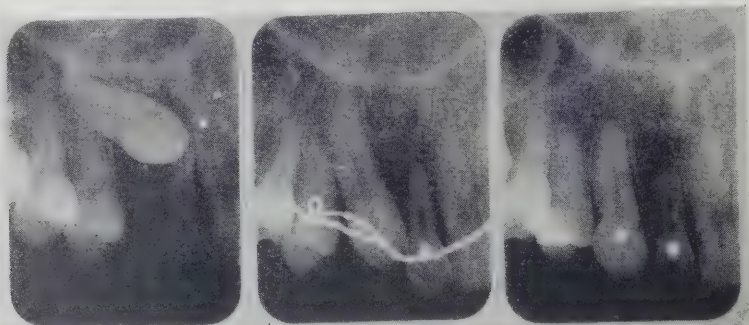
CASE II **Figure 1**
Occlusal roentgenograph illustrating lingually inclined impacted maxillary cuspid.

roentgenogram (Fig. II) which in this instance illustrates the resultant increase in the size of the enveloping coronal sac due to pressure atrophy.

Progress accomplished by orthodontic procedures in the space of one year is illustrated in Fig. III while Fig. IV illustrates the formerly impacted cuspid in good functional relationship and normal position at the end of eighteen months.

Length of time of treatment in all of these types of cases necessarily depends on the age of the patient and the angulation of the impaction but it has been our experience that in every case the patient should at least be given the benefit of orthodontic consultation.

Refinements in technique of asepsis, improvements in methods of treatment



CASE II **Figure 2**

Figure 3

Figure 4

Fig. 2—Dental roentgenograph illustrating mesio-distal relation of impacted cuspid.

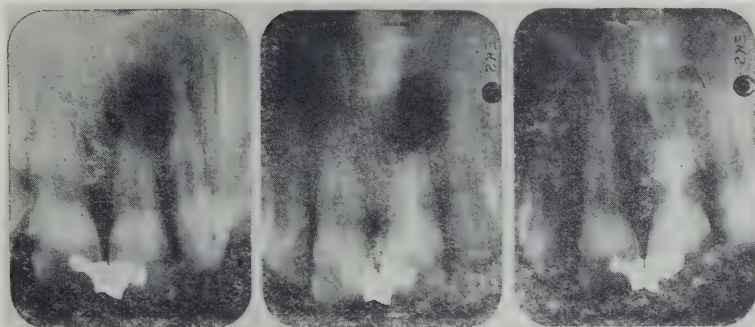
Fig. 3—Roentgenograph illustrating orthodontia appliance in place and resultant movement over a one year period.

Fig. 4—Roentgenograph illustrating formerly impacted cuspid now in its normal position, after one and one-half years treatment.

posed to allow capping. Such a typical case is illustrated in CASE II, Figs. I-IV. The patient, male, age fifteen years. Pre-operative prognosis is generally aided by an occlusal ray (Fig. I) which illustrates bucco-lingually the approximate position of the impacted cuspid. The position of the impacted cuspid mesio-distally may be obtained by a dental

have all served to restore to favour root resection for the devitalized or pulpless tooth. This procedure in the hands of competent general practitioners if carefully performed will place many teeth, otherwise sacrificed, in a satisfactory functional condition.

One would suggest that for the most part root resection be confined to the



CASE III

Figure 1

Figure 2

Figure 3

Fig. 1—Pathological involvement of maxillary central incisor.

Fig. 2—Post-operative roentgenograph following root resection and curettage of cystic pathological area.

Fig. 3—Post-operative roentgenograph one and one-half years later, illustrating bone regeneration.

anterior six teeth and further that it be restricted to patients between the ages of fifteen and thirty-five. If this suggestion is followed a much better percentage of successes will be evidenced.

To illustrate such a case (CASE III) we have selected that of a male, age, thirty-five years with a considerable degree of pyorrhetic and periapical involvement. Certainly from the standpoint of bone

structure this was not an ideal tooth for root resection.

In conclusion it should be re-emphasized that conservatism in dental surgery depends largely on an intelligently interpreted roentgenogram. In almost every instance, local anaesthesia is the anaesthetic of choice and pre- and post-operative medication is essential to patient management and comfort.

A Christmas Message From the Dean to the Students of the Faculty of Dentistry, University of Toronto

All classes and laboratories as well as the Infirmary will be closed for the Christmas vacation from Friday, December 19, at 5.00 p.m., to Monday, January 5, at 9.00 a.m.

During the past twenty-seven months the courage of the British peoples has been tested in many theatres of war. We have met reverses of grave magnitude at Dunkirk, in Norway, in Libya and at Crete. The Battle of the Atlantic has tested our navy and the merchant marine has suffered great losses on the seas. In spite of these reverses much has happened which makes us feel that victory is closer and that it can be achieved if we put forward our every effort. Abyssinia has been restored and we are supreme in the Near East. The passage to the oil field of Iran has been blocked to our enemies. Russia is holding; the outcome in Libya looks bright, and the British Navy is still master of the seas.

Japan's cowardly attack of Sunday, December 7, has finally unified all the countries

opposed to axis domination to fight for right and freedom. All decent citizens of the United States of America are with us whole-heartedly as well as many other peoples of American countries.

In spite of prolonged personal attack and disaster, the stout hearts of the peoples of the British Isles are still courageous and loyal, pressing on to an ultimate victory.

The strength and virility of the Christmas message through the birth of a Saviour will uphold us. Meditate on the life of Christ and gain courage that we may endure to the end.

I feel that I can on this third Christmas of the war, because of the greater international support to the cause of the allied nations, at least wish you the Season's Greeting. I hope that we may see a very favourable change in the world conditions during the New Year, which will eventually lead to a just peace.

Dec. 12, 1941.

ARNOLD D. MASON.

The Forum

• A TECHNIQUE FOR THE REMOVAL OF FRACTURED ROOT TIPS

by EDWARD C. STAFNE, D.D.S., Section on Dental Surgery, Mayo Clinic, Rochester, Minnesota.
(Condensed from *North-West Dentistry*, July, 1941.)

ABOUT twelve years ago a study was made to determine the incidence of failure in the extraction of teeth. With the aid of roentgenograms 20,000 edentulous regions were observed. The incidence of failure in lower teeth was 5.75 per cent as compared to 3.35 per cent in the upper teeth.

One of the most useful contrivances at our disposal, and one which is rarely made use of, is an aspirator. It is my opinion that the average time for recovering roots that have fractured can be reduced by a half if one employs an efficient method for control of haemorrhage, so as to permit a good view of the root to be removed.

The pre-operative roentgenogram is of invaluable aid in the extraction of teeth.

When a tooth breaks under the forceps and a root is fractured at some distance below the crest of the socket, if the root cannot be delivered easily from the socket by engaging it with a sharp instrument or elevator, it is preferable to resort immediately to a standardized surgical technique.

A flap of soft tissue is laid back to expose the buccal or labial bone. The flap should be large enough to permit a good view, and should be planned to cause the least interference with blood supply, with due consideration for structures such as the mental foramen. The incision should be made so that the line of closure will be supported by normal bone and never directly over where bone has been removed.

Almost invariably only one incision is made, and that anterior to the root to be removed whenever possible. With a knife sufficiently heavy to cut through the periosteum the incision is started at the anterior part of the crest of the tooth socket, extended forward and diagonally away from the crest to a distance which is about equal to half the depth of the tooth socket, from where it is continued posteriorly and away to a point directly over the bottom of the socket.

With the aid of a periosteal elevator the periosteum and soft tissue are raised and forced backward, and the flap thus made is retracted to uncover the bone on the buccal or labial surface. The bone is then removed to expose the root. For removal of bone the dental bur, bone drill or chisel may be used. The chisel has a decided advantage however, in that it removes bone more cleanly and quickly.

When the desired amount of bone has been removed it may be possible to engage the root conveniently with a forceps or elevator, but if this is not feasible, a sharp instrument is inserted between the root and the lingual wall of the socket to force the root buccally and thereby dislodge it from its socket. In some instances a surprisingly easy method for dislodging the root, and one which requires removal of less of the buccal bone, is to engage it with the sharp point of an instrument which is directed as near as possible toward the open end of the socket. By a light tapping with the mallet the root is often driven from the socket with much less force than is necessary for delivering it by means of an elevator.

When the root has been removed, the loose fragments of bone are removed, and

the flap is returned carefully to place and sutured.

In removing a fractured palatal root of an upper first bicuspid the approach which makes for better access is from the buccal surface. The bony buccal wall of the socket is removed up to a point where a good view of the root may be obtained when it is uncovered. The entire bony septum which separated the buccal and palatal roots of the tooth can be removed by means of a bur or a narrow chisel. This procedure completely uncovers one side of the root. A pointed instrument is then inserted or wedged between the palatal wall of the socket and the root, forcing the root buccally to dislodge it.

Removal of roots of upper molar teeth that fracture beyond their bifurcation presents a more difficult problem, particularly, when fracture involves the palatal root. The buccal roots are removed by making a flap and following the method described for the removal of fractured bicuspid roots. However, since these roots are often situated in the buccal wall of the maxillary sinus, added precaution must be taken to remove sufficient buccal process overlying the root so that very little, if any, force is needed to displace it buccally and dislodge it from its socket.

In event of fracture of the palatal root its position in relation to the maxillary sinus will largely determine the approach to be made for its recovery. In no other instance is there greater need for accessibility and a good view of the field of operation. If the floor of the maxillary sinus is well above the apices of the roots of the teeth, the best access is afforded by making a flap on the buccal surface and removing a part of the buccal process. Since there is but little danger of perforating the maxillary sinus, the bony septum that divided the roots is cut away until the root is uncovered. An appreciable amount of the root can be un-

covered before removal is attempted, since the palatal roots of the adjoining teeth are sufficiently distant to allow the removal of bone both anterior and posterior to the fractured root. This often affords better application to the root for its delivery.

Where the maxillary sinus is large and extends down between the roots of the tooth, a fractured palatal root is then situated on the palatal surface of the sinus. To avoid perforation of the sinus it becomes necessary to confine the field of operation to the palatal surface as much as possible. Occasionally the approach can be made safely through the open end of the tooth socket, by removing sufficient bone either anterior or posterior to the root to obtain an application on it. In some instances it may be necessary to make a palatal flap and remove the bone overlying the palatal surface of the root in order to obtain access to it. However, this approach should be resorted to only when necessary.

• THE PHONY WAR

by EDWARD SAMSON, I.D.S., Bournemouth,
England

(Condensed from *Oral Hygiene*, November, 1941.)

DENTISTS, who have lost highly remunerative practices in London, begin again in small country towns. They are not miserable, neither are they, in their own eyes, the tragedies of war. They are just dentists carrying on. There are elderly men who have grown grey with their practices in seaside towns, now acting as paid assistants to colleagues thirty years their junior in strange districts. A bomb has, in a flash, inverted normal relationships.

Now, when the dear little woman complains of cervical margins sensitive to chocolate, one no longer rushes for the silver nitrate nor omnisciently prescribes two and one-half per cent formalin. With unprofessional disinterest in the path-

ology of the case, one brazenly asks where she got the chocolate.

In those leisurely days of peace I sometimes received gifts from patients whose full lower dentures, by luck, had been made to fit, or whose restorations, due to atrophied pulps, were performed painlessly. An etching, a small bronze, an ivory chess set were a few of the delightful manifestations of their esteem. Today the gifts are less frequent if more appreciated. Only yesterday an old lady surreptitiously handed me five cigarettes. Last week a young man brought me five tomatoes of his own growing. A small girl of eight proudly presented me with a box of cheese.

This does not mean that dentists, or other people, are starving. It means only that the scarcity of certain things has altered our sense of values, our tastes, and requirements. The real and essential have taken the place of stupid prejudices and the belief that our luxuries were indispensable. This phonyism is giving us perspective.

Economically dental practice is in a dilemma—at least, certain types of practice. The cost of materials, labour, utilities, added to increased cost of living and income tax, have greatly added to the dentist's expenses. On the other hand, these same factors have also influenced the lives of his patients, particularly those living on invested capital. Thus, while the dentist should legitimately raise his fees, his patients, in many instances, ask for reduction. Where a long association has existed between the two, in a well-established family practice, the dentist cannot do less than help his patient. He certainly cannot, in all honour, provide cheaper or inferior service, nor can he turn his old patients away. If, however, he is to endeavour to maintain his income he must work more for, in the most part, lower fees. Yet, if he is wise, he does not complain, knowing well that he is

fortunate to be able to work more, when, perhaps, thirty miles away his colleagues cannot do anything. A bomb makes such a difference in the course of one's life; and it may drop here or it may drop there. If by chance a few thousand drop on a chosen district, the dentists there may find they suddenly have no practices—or the practices, no dentists.

At nights, innumerable dentists spend long hours fire-watching, drilling with the Home Guard, taking general anaesthetic courses, doing war work in a thousand different ways. When they return to their practices next day, if the surgery is there, they will begin the old routine over again. Teeth will be restored as they always have been. Teeth will be extracted and replaced. The telephone will ring; appointments will be made and cancelled. Fingers will be covered with lipstick by one patient; another will grumble about a sore place caused by her denture, though she has just lost her house. (A patient apologized to a clinic dentist for being a half hour late because, "My 'ouse 'as just been 'it.") So it will go on—the quotidian round. And when the day is done, the dentist may read his journal in a spare half hour—read about caries and its cause—or the anthropological value of the new Sterkfontein tooth. He may even go to a meeting of his association to hear a paper read on the movement of the temporomandibular joint.

Call it phony, if you like, but it's a most revitalizing phonyism, which is keeping dentistry, with all else, on top. For all our difficulties, if any dentist I know were not now here, I'll swear he would echo what Rupert Brooke wrote from Berlin:

"God! I will pack, and take a train,
And get me to England once again!
For England's the one land, I know,
Where men with splendid hearts may
go."

• ALKALI HELPS REDUCE COMPLICATIONS OF SULFATHIAZOLE

THE administration of an alkali, such as sodium bicarbonate, with sulfathiazole, and possibly also with sulfadiazine, two derivatives of sulfanilamide, is advised by Leon Schwartz, M.D.; Harrison F. Flippin, M.D.; John G. Reinhold, Ph.D., and Albert H. Domm, M.D., Philadelphia, in *The Journal of the American Medical Association* for August 16 as a means of decreasing the incidence and number of crystals of these drugs in the urine.

The four men point out that recent medical literature contains many reports of bloody urine, deficient secretion of urine, urinary stones and other complications associated with the use of these drugs. These kidney complications are due, in part if not entirely, to the presence of crystals of these drugs in the urinary tract and some of them necessitate a discontinuance of administration of the drug at a time when treatment is most desired.

To ascertain the effect of alkali on the incidence and number of crystals detected in the urine of patients receiving sulfathiazole or sulfadiazine, the four investigators administered sodium bicarbonate in an amount equal to that of the drug to 37 pneumonia patients and compared the urinary findings with those of 63 pneumonia patients who were not

given an alkali. The incidence and number of crystals of the drug found in the urine samples were distinctly less in the group of patients receiving an alkali together with either sulfathiazole or sulfadiazine, particularly with the group receiving an alkali with sulfathiazole.—*Jrl., 2nd District D. Soc., Nov., 1941.*

• MATERIAL REWARDS IN DENTISTRY

(Excerpt from *Dentistry as a Professional Career*)

THE enduring rewards of a life given to dentistry from the standpoint of service to humanity and satisfaction in useful work well done are very great and account strongly for the number of young men who turn to dentistry for a career. The actual material rewards and the chance of acquiring a competence, while not large on the average, are favourably comparable with the incomes in other learned professions. The most recent dependable study was issued in September, 1939, by the U.S. Department of Commerce under the title "Economic Conditions in the Dental Profession, 1929-37." This study reports the results of a nationwide survey of economic conditions in the dental profession and covers the years 1929, 1933, 1935, 1936 and 1937. The average net income of dentists by membership or non-membership in the American Dental Association for these years was found to stand as follows:—

Average Net Income	1929	1933	1935	1936	1937
Members	\$4,837	\$2,542	\$2,916	\$3,186	\$3,386
Non-members	3,396	1,796	1,941	2,116	2,177

The average net income of dentists in 1937 according to type of practice and type of income by membership or non-membership in the American Dental Association was also reported as follows—

	General Average	Type of Practice			Type of Income Recipient		
		General Practice	Partly Specialized	Wholly Specialized	Non-Salaried	Part Salaried	100% Salaried
Members	\$3,386	\$3,244	\$4,219	\$5,642	\$3,352	\$3,988	\$3,454
Non-Members	2,177	2,165	2,424	3,985	2,160	2,382	2,521

• **ADEQUATE VITAMIN DOSAGE**

by P. W. BROWN, M.D., Rochester, Minn.
(Excerpt from article in *Proc. Staff Meetings, Mayo Clinic* 15: 215, 1940)

1. Vitamins are best obtained in normal foods, and people who eat a fairly wide variety of foods need have no concern about vitamins or lack of them.

2. Vitamins are not a "cure-all." Furthermore, the addition of vitamin supplements to a normal diet is of no value, in the absence, of course, of disease or a previously inadequate diet. This is proved in the case of ascorbic acid at least; beyond a point of normal saturation of this acid, the body promptly eliminates the excess.

3. Many people, because of economic conditions, unusual food habits, or illness, are in a condition of marginal or actual vitamin deficiency. In many instances there may be no frank signs of such a deficiency; furthermore, when this deficiency exists, it is usually a multiple vitamin deficiency.

4. There is an unusual disproportion between what is now considered to be the normal daily need for vitamins and the amount required for the treatment of the deficient state. In amplification of this, it can be said that, if there is no obvious response to adequate dosage within a few days, there is little or no need to continue this particular treatment.

5. The vitamin preparations which contain four or five different vitamins have some justification in the treatment of people who are not ill but who are "poor eaters" and who are in poor health. This applies chiefly to elderly individuals. Otherwise, there is little with which to justify their usage.

6. It should be remembered that vitamin K is rapidly lost when illness or faulty diet intervenes. There is practically no storage of vitamin K. This likewise applies to vitamins C and all the B group, although there is apparently a slightly greater margin of safety in the

use of vitamins C and B than there is in the use of K. Vitamin A and probably vitamin D may be stored in amounts which will last for months.

• **NUTRITION AND DENTAL HEALTH**

by DOROTHEA F. RADUSCH, D.D.S., B.A.,
M.S., Minneapolis, Minn.
(Excerpt from *Jour. of A.D.A.*, September, 1941.)

WITH such a large percentage of diets in marked need of improvement, and since tradition, habit or "natural selection" are not safe guides to optimal nor even adequate nutrition, dentists should advise the adjustment of food habits and diets to conform with the principles of good nutrition. For an adequate diet, a simple guide for the daily menu should be followed:—

Meat: One serving of meat, fish or fowl daily; or at least five times a week.

Milk: One pint to one quart daily.

Eggs: One or two daily, or at least five a week.

Butter: One or two tablespoons daily.

Vegetables and fruits: Five servings daily: One serving of citrus fruit or tomato. One serving of potato. One serving of green or yellow vegetable. Two other servings of fruit or vegetable.

Cereal foods (foods composed predominantly of grain products): Four to six servings daily, with at least half of whole-grain or enriched cereal.

Desserts: Once daily, twice only when it will not displace protective foods.

Refined cereal, not enriched, and sugar foods, including soft drinks, desserts and candy, should be limited because they are likely to usurp the place of foods supplying dietary essentials as well as having other undesirable effects.

To indicate the need for improvement of the patient's diet, it is recommended that dietary histories and analyses be made whenever possible.

With the exception of vitamin D, which does not occur to any appreciable extent in common foods, it is best to obtain minerals and vitamins from natural

food sources rather than from pharmaceutical preparations. There is considerable evidence that the body may use vitamins from foods better than in chemical form, either because of known factors supplied at the same time which are necessary for efficient utilization or because of as yet unrecognized factors.

• DENTAL ECONOMICS

Edited by OSCAR JACOBSON

"WHERE IS DENTISTRY GOING IN PUBLIC HEALTH"

DR. NATHAN SINAI, speaking before the Oral Health Group of the American Public Health Association, asks the above question and then discusses the objectives of dentistry as a public health factor.* Dr. Sinai's position as Professor of Hygiene and Public Health at the University of Michigan and his known interest in dental problems gives his comments more than ordinary significance.

Dr. Sinai cites the public dental health problem as "one that concerns at least three-fourths of the nation's school children." He then goes on to show the great diversity of activities coming under the title of public health dentistry.

"In one community public health dentistry is characterized by the purity of its emphasis on education. The program has to do with the diet, the tooth-brush and the emotional values of dental perfection. As an addendum children are advised to see their dentists."

Public health dentistry, says Sinai, has not received the support of health administrators because "the dental problem epitomizes the kind of problem against which the administrator has made little headway—the problem of obtaining corrections of defects after they are found."

This situation should be changed soon because of a recent redefinition of public health objectives contained in the "Declaration of Attitude" of the American Public Health Association.

"In its effect the new definition expands the sphere of public health so that it embraces public health dentistry. But just as the redefinition outlines a huge task for the public health administrator, so does it for the public health dentist."

The primary objective of the dental program should be regular examinations followed by the dental treatment indicated. The implication of this is that the dental profession must be consulted in any program. The Declaration discusses this as follows:

"In deciding whether a given health procedure shall be conducted by the department of health directly or by individual medical practitioners or other agencies, the primary consideration shall be the welfare of the community. Relative cost, relative efficiency, and the practicability of adequate supervision must be considered. Where these factors are reasonably equal *preference should be given to a program which decentralizes health procedures so as to enlist the private practitioner in their application.*" (Italics ours.)

The factors involved must be evaluated carefully, and Dr. Sinai believes that "the task of collecting the evidence upon which to base values belongs definitely to the public health dentistry."

The problem of bringing the majority of the child population to the dental office regularly "calls for the creation of a public demand and an integration of public health and private facilities." The private practitioner must not only render services but also act as an educator. The efficacy of a dental program should not be judged by the number of children who come to the dentist's chair once or sporadically but by those who become regular patients. Such a program must be based upon clearly defined and accepted responsibilities of the public health agency and the private practitioners and an adequate record system.—N.Y. *Jrl. of D.*, October, 1941.

* American Journal of Public Health, June, 1941, Vol. 31, p. 583.

• **DISTORTED SOCIOLOGY**

THE advocates of "public medicine," as they call it, are still going strong. They want to bring group medicine to everybody everywhere. Neither compulsory nor voluntary insurance schemes will solve the problems of preventive medicine and care of the ill. They figure the cost of a system of public medicine at about a billion dollars a year.

These advocates are strangely silent as to what should be done about the incomes, feeding, clothing and housing of the needy.

What avail will bureaucratized medicine be to the basic plight of the families with incomes of \$1,000 a year, comprising 50,000,000 persons?

Why such zeal to give medicine to the needy while all else is withheld?—*Ed. in Medical Times.*

• **THE A-B-C OF VITAMINS**

CHA, in *St. Bartholomew's Hospital Journal*, reprinted, *Physicians Bulletin*, Eli Lilly Company, Indianapolis, May-June, p. 92.

(Submitted to the *Journal of the C.D.A.* by *Father Ernest Cummer, D.D.S., F.A.C.D., C.S.B.*)

—A—

O fine and fat was Ralph the rat, and his eye was a clear, cold, gray,
How mournful that he ate less fat, as day succeeded day
Till he found each cornea hornier and hornier, lacking its Vitamin A.
'I missed my Vitamin A, my dears'—that rat was heard to say,
'And you'll find that your eyes will keratinize, if you miss your Vitamin A.'

—B—

Now polished rice is extremely nice, at a high suburban tea,
But Arbuthnot Lane observes with pain, that it lacks all Vitamin B,
And beri-beri is very, very hard on the nerves, says he.
'O take your Vitamin B, my dears'—I heard that surgeon say,
'If I hadn't been fed on Standard bread, I shouldn't be here today.'

—C—

The scurvy flew through the schooner's crew, as they sailed the Arctic sea
They were far from land and their food was canned, so they got no Vitamin B,
For 'Devil's the use of orange juice' the skipper had said, said he.
They were victualled with pickled pork, my dears, those mariners, bold and free
But life's but brief on the best corned beef, if you don't get Vitamin C.

—D—

The epiphyses of Jemima's knees, were truly an appalling sight
For the rickets strikes whom it jolly well likes, if the Vitamin D's not right,
Though its plots we foil with our cod-liver oil, or our ultra-violet light
So swallow your cod-liver oil, my dears, and bonny big babes you'll be.
Though it makes you sick, it's a cure for the rickets, and teeming with Vitamin D.

—E—

Now Vitamins D and A,B,C, will ensure that you're happy and strong
But that's no use, you must reproduce, or the race won't last for long,
So Vitamin E is the stuff for me, and its praises end my song.
'We'll double the birth-rate yet, my dears, if we all eat Vitamin E
We can blast the hopes of Maria Stopes, by taking it in our tea.'



PRINCE EDWARD ISLAND

*D. T. Waye, Charlottetown*

NOVA SCOTIA

*S. G. Ritchie, Halifax*

NEW BRUNSWICK

*W. C. Carruthers, Saint John*

Editor—M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S

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*E. M. Laurin, Montreal*

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MANITOBA

*J. F. Morrison, Winnipeg*

SASKATCHEWAN

*F. C. Harwood, Moose Jaw*

ALBERTA

*John Clay, Calgary*

BRITISH COLUMBIA

*J. S. Bricker, Vancouver*

The Value of Unification in Dentistry

by DON. W. GULLETT, D.D.S., Toronto, Ontario
Ontario Delegate of the Canadian Dental Association

Secretary of the Board of the Royal College of Dental Surgeons of Ontario

"It is not the gods, but we ourselves who shape our destiny".

—SOCRATES.

Mr. A. E. Rowlett, L.D.S., Past President of the British Dental Association and now Foreign Representative of that Body, has been spending some time in Canada. Those who have had the privilege of being associated with him during his visit have felt his inspiring influence. He came to seek data for post-war dental reconstruction but has left us far more than we were able to contribute.

The men who heard his initial addresses felt that his message was urgently needed by the profession of dentistry in Canada. Upon being approached he generously offered his time, if it were thought he could do a job for dentistry, and consequently arrangements were made for him to give a series of addresses across Canada.

Many Canadian dentists have been attempting to widen their dental thinking to national proportions but here is a man who has a fully developed international outlook on dentistry. A few days' association with him has

served to broaden our professional concepts. Let us examine closely the definition of dentistry he left with us.—“Dentistry is a profession embodying an art and a science. It is an integral part of the health service of the community with particular reference to the teeth and the surrounding tissues.”

On no occasion in his associations or in his addresses did he make any specific suggestions regarding Canadian dentistry, yet his listeners plainly saw that, if post-war problems are to be dealt with, unification must be achieved on a better basis than now exists. A new world-wide awakening to the dental health condition of the people is upon us. The recognition of this situation has been rapidly growing. It is true that the military physical examinations have given added impetus to this recognition but without the war the time would certainly have ultimately arrived. Dentistry, as a national profession, should have been prepared for such a situation years ago. Undoubtedly our profession will be requested to take up its share of the burden along with other health agencies during the post-war period. Will Canadian dentistry be found wanting?

A few men have had the vision of establishing dentistry in Canada on solid footing. They have laboured, many in vain, over the years and now unfortunately when fruition of their efforts is, to some measure, appearing on the horizon, they themselves, will receive little if any benefit. Most probably this is as they would desire for their efforts have been altruistic to say the least, and they have striven to make their chosen profession a little better for those who follow.

National dentistry must not depend upon decisions that are half developed, fractionally supported, or inadequately based upon fact. Issues must be met with the backing of the whole dental profession and facilities adequately provided so that such may be the case. There is no time now for tempering judgment with any petty inside dental politics. The ship of dentistry must be carefully guided away from the dangerous shoals. Canadian Dentistry must be graduated from the correspondence school of indefinite understanding and matriculated into the university of intimate knowledge.

A clearing house for the dental profession of this Dominion, firmly established, should act as a binding influence, to unify thought and action. Such establishment, no matter what form it may take, should offer an abundant opportunity for service to our profession. The most unfortunate situation in which any organization can find itself is to be hopelessly divided when circumstances demand a united stand. This clearing house should have the pulse of the profession recorded at all times. If occasion should arise, as it may, when Canadian dentistry must give immediate decision on any matter, there should be machinery in existence so that authoritative word can be given, in at least twenty-four hours, representing every dentist in Canada.

We owe a debt of gratitude to the British Dental Association for sending

Mr. Rowlett to us. He has with due tact and skill pointed out the position dentistry must occupy in the post-war period. We feel that he has imbibed freely at the wells of knowledge. He has left us with a desire to build for dentistry so that in the reconstruction period we may be prepared to take our place in the democracy of the future.

"Democracy", he stated, "is a form of government (state of society) which gives not freedom to do as you wish, but liberty to do as you ought."

Oldest Known Canadian Dentist

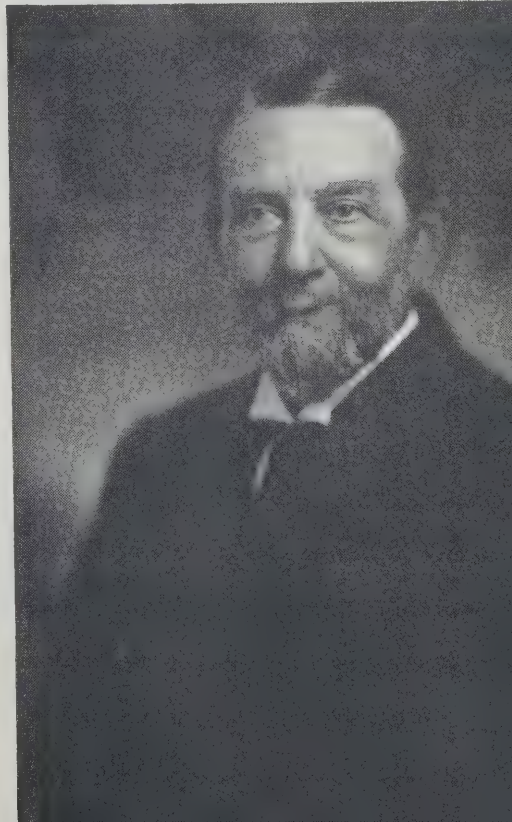
In the November issue of the Journal there appeared an editorial on the "Accomplishments of Advanced Age," outlining some of the activities of Canadian dentists around the age of eighty years, still in active practice.

We would like to refer now to another unusual dentist; namely, Dr. Solon Woolverton, of London, Ontario, who, as far as is known, is the oldest living dentist in the Dominion and possibly on the continent.

Dr. Woolverton was born on March 31, 1845, at Grimsby, Ontario, of English parentage. His father was Dr. Jonathan Woolverton, a general practitioner of medicine. He obtained his matriculation at Woodstock College in 1866, after which he became a student of medicine in Victoria Medical College and also at a medical college in Pennsylvania, subsequently entering the Royal College of Dental Surgeons of Ontario as a dental student early in 1870, graduating July 19, 1871.

He was associated with Dr. Curtis Chittenden in his office at Hamilton, Ontario, and practised at Grimsby, Smithville, and Beamsville (once a week) until the year 1880. From 1880 until 1935 he practised continuously at London and is now an honorary member of the Royal College of Dental Surgeons.

SOLON WOOLVERTON



Dr. Woolverton has led a most active life and has taken a great interest in things outside of dentistry. Among his many activities are the following: a private under Captain William Nelles of Grimsby in the Fenian Raids 1866; instructor for a number of years in geology at University of Western Ontario, London; he possesses a large collection of relics in natural history, etc.; he is a member of the Canadian Order of Foresters, Odd Fellows and Maccabees. He was introduced to the King and Queen on their recent visit to Canada.

Upon his retirement from practice in 1935 he sent his diploma, turn key, models and books to the college. He is now an honorary member of the London Dental Society. Although unable to attend any of the meetings, he states that he takes a great interest in them.

Dr. Woolverton was married October 22, 1873. His wife predeceased him some years ago and he now lives with his daughter. He is an Anglican in religion. Considering that he is now in his ninety-seventh year, he enjoys reasonable health and takes a keen interest in the affairs of today.

I am indebted to D. Don Gullet, Secretary of the Board of the R.C.D.S. of Ontario, for securing for me this information about Canada's oldest dentist.

—M. H. G.

BOOK REVIEW

Professional Dentistry in American Society, (Part 1), by Alfred J. Asgis, Ph.D., D.D.S., Assistant Professor of Oral Surgery and Lecturer on Orientation at the New York University, College of Dentistry. Published by the Clinical Press, 1123 Broadway, New York. Price \$3.50. (Part II will be issued later.)

The author of this book has spent his whole life in the work of improving mankind through dentistry. Asgis recognizes in a practical way that everybody needs dental care and wants something done about it. He proposes a universal health service regardless of an individual's ability to pay and that teachers of dentistry be trained in schools having this social aim. In this way the dental student should develop a social attitude towards dentistry as well as a professional and scientific

attitude. Asgis points out that dentistry is an integral component of our democratic society and therefore our objective should be health-service for all.

This book (Part 1) is divided into four sections entitled, "Background of Professional Dentistry," "Background of Dental Education," "Current Trends in Dentistry," and "Looking Ahead in Dentistry." The author discusses educational standards; the public demand for dental service; what are the opportunities in dentistry today; will dentistry be able to provide adequate dental service; will dentistry prevent the loss of teeth; will the dentist of the future be better off, and related subjects. Such a discussion should prove helpful to dental and medical students and all others concerned with the evolution and growth of dentistry.—M. H. G.

Not only is it right as a matter of abstract truth, but it is just that younger and less experienced men should feel that matters do not always go well with their seniors; that others who have had far longer and wider experience than they have at times to regret untoward and unsuccessful operation. Of course, those who have had most experience and are naturally gifted with mechanical dexterity will have the largest average of success; but I trust that, in our profession, no one will shrink from acknowledging that success does not always attend his best efforts.—S. James A. Salter, M.B., in Dental Record.

CORRESPONDENCE

Regina, Saskatchewan, Dec. 17, 1941
To the Editor, Journal of the C.D.A.

This is to convey Christmas greetings and best wishes for the New Year to you and to the staff of the Journal from No. 32 Coy., C.D.C.

You can be assured that every issue of the publication is anticipated with interest and pleasure, and is received with gratitude by the officers of the Corps in this District.

In addition to the splendid articles on general subjects, your generous allotment of space to Corps items and contributions is read with particular interest.

There is always that underlying spirit of willingness to co-operate fully shown at all times, and your sustained effort in this respect is fully appreciated.

A. G. SMITH, Major,
District Dental Officer, M.D. No. 12.

DENTAL CORPS NEWS

Ladies' Auxiliary, C.D.C. of M.D. No. 13

A Ladies' Auxiliary to the Canadian Dental Corps of M.D. No. 13, was formed last September by a charter authorized under the War Charities Act.

The following Officers were elected:

Honorary President—Mrs. L. V. Janes.

President—Mrs. A. M. Palmer.

1st Vice-president—Mrs. R. H. McDougall.

2nd Vice-president—Mrs. F. M. Murray.

Secretary—Mrs. J. E. Hesson.

Lt.-Col. W. G. Dawson, D.D.S., of Halifax, D.D.O. of Military District No. 6.

He was graduated from Dalhousie University in 1925 and practised in Halifax until joining the C.A. in December, 1939.

He was appointed to the Faculty of Dentistry, Dalhousie University, in 1927 as part-time demonstrator in operative dentistry and metallurgy.

He served in N.P.A.M., C.A.D.C. from 1939 until transferred to Active List in 1939 as Captain, No. 26 Company; posted to No. 15 Company in May, 1940; appointed D.D.O. with the rank of Major, June, 1940; and promoted to Lt.-Col. in August, 1941.

Lt.-Col. Dawson is married and has two sons. His hobbies are shooting, fishing, curling, and sailing.





OFFICERS AND OTHER RANKS OF DENTAL CORPS

FRONT ROW, *left to right*: Sgt. Angen, J.J., Cpl. Stephenson, H.C.J., Sgt. Pridham, W.A., Sgt. Moase, S.G., Sgt. Halliwell, H.M., Sgt. Mark, G., Sgt. MacPherson, F.J., Cpl. Ade, T.J., Sgt. Delaney, H., Sgt. Luton, D.G., Sgt. Gaetz, M.F., Sgt. Cross, A.G., Sgt. Browning, L.G., Sgt. Johnson, H.J., Sgt. Goddard, G.W., Sgt. Wainman, R.E., Sgt. Fielding, N., Sgt. Mullens, J.F., Sgt. Harwood, W.G., Sgt. Blatchford, C.P.

SECOND ROW, *left to right*: Sgt. Fairhurst, E., Sgt. Hilcheson, W., Sgt. Arsenault, A.J., C.S.M. Stevens, W.F., Capt. H. S. Grey, Capt. G. C. MacLeod, Capt. W. O. Vrooman, Capt. J. J. Schachter, Capt. F. L. Hebert, Capt. L. H. Holmes, Capt. W. R. B. Wilson, Capt. R. T. Broadworth, Capt. I. A. L. Millar, Capt. J. E. Abra, (Adj.), Lt.-Col. L. V. Janes (O.C.), Capt. R. G. Wait (Q.M.), Capt. K. I. Levinson, Capt. D. G. Hall, Capt. M. Nacht, Capt. C. M. Johnson, Capt. G. M. MacDonald, Capt. S. K. Oldfield, Capt. K. M. Baird, Capt. A. I. Hamilton, C.Q.M.S. Wright, D.S., Sgt. Reid, H.M., Sgt. Thorne, I.J., Sgt. Fitzgerald, J.W.

Asst. Secretary—Mrs. S. Riskin.

Treasurer—Mrs. S. M. Somers.

Social Convener—Mrs. K. McNally.

War Convener—Mrs. W. F. Stevens.

Sick Convener—Mrs. A. E. Halpin.

Since organizing, the ladies from the southern part of the Province have put on an intensive drive for funds through several enterprises, culminating in a draw held at the Palliser Hotel supper dance on the evening of

November 15. His Worship Mayor Andrew Davison, kindly consented to make the draw for ten beautiful prizes donated to the Auxiliary by public spirited merchants of Calgary.

As a result, the ladies were successful in raising \$1150.00 for Overseas work. Every Overseas officer and Other Rank from this District have been sent 300 cigarettes, together with a 9 pound Christmas hamper to reach them before Christmas.



A COMPANY OF THE CANADIAN NOW OVERSEAS

THIRD ROW, *left to right*: Pte. Latham, W., L/Cpl. Hett, O.C., Pte. MacCready, C.D., Pte. Watts, G.L., Pte. Beaton, J.J.R., Pte. Brown, P.L., Pte. Pratt, W.M., Pte. Bishop, G.E., Pte. McNeil, D.C., Pte. Gorman, J.L., Pte. Johnson, A.J., Pte. Waters, G.C., Pte. Muir, W.G., Pte. McGeein, J.N., Pte. Panchuk, M., Pte. Finley, N.E., Pte. Wilson, E.R., Pte. Wilson, J.W., Pte. Marcellus, J.C., Pte. Schofield, C.L., Pte. O'Farrell, J. G. M., Pte. Earle, H.W., Pte. McCauley, J.E., Pte. Langlais, I.

FOURTH ROW, *left to right*: Pte. Hurford, J.H., Pte. Murphy, J.J., Pte. Davidson, A., Pte. Duguid, W.N., Pte. Moran, H.M., Pte. Hutton, W.F.E., Pte. Whetter, M.F., Pte. Neily, L.G., Pte. Moffatt, D.T., Pte. Olmstead, T. J., Pte. Leska, M., Pte. Bigley, P., Pte. McKay, I.A., Pte. Lanove, N., Pte. Jerrard, L.C., Pte. Beaulne, A., Pte. Nadeau, W., Pte. Price, G.H., Pte. Proctor, C., Pte. Watson, J., Pte. Wells, J.W., Pte. Deschenes, L.P., Pte. Keen, R.

These hampers contained a one pound can of hot chocolate mixture, a pound of cheese, a pound of fruit cake, candy bars, chewing gum, razor blades, cubes of meat extract, a can of peaches, a can of salmon, a pound of raisins, and strawberry jam.

It is also planned to keep a continual flow of cigarettes going Overseas throughout the year, as well as other comforts from time to time.

M.D. No. 13, Headquarters Calgary, Alta.

Several Officers of the Canadian Dental Corps from Military District No. 13, have recently proceeded Overseas, among whom are Lt.-Colonel L. V. Janes, formerly District Dental Officer, M.D. No. 13, and now in command of No. 5 Dental Coy. Overseas; Captain W. R. B. Wilson, Captain S. M. Somers, Captain J. E. Hesson, Captain Geo. Page, and Captain D. R. Bowen, Quartermaster.



Major L. E. Riddolls, District Dental Officer of M.D.1. He was graduated from the Royal College of Dental Surgeons of Ontario in 1925 and practised in Brantford, Ontario, where he took a keen interest in military affairs as an officer of the Dufferin and Haldimand Rifles of Canada. In this unit he served as Assistant Adjutant and Adjutant from 1934 to 1939, when a transfer was effected to the C.D.C. and he was appointed Records Officer, C.D.C. (R.C. A.F.) at Ottawa.

He is a past president of the Brant County Dental Society and the Brantford Lions Club.

Major Riddolls is married and has two small boys. Duty with the Corps has superseded his former interest, which he claims was golf.

NEWS FROM THE PROVINCES

ALBERTA:

Calgary Dental Assistants' Association

The November meeting of the Calgary Dental Assistants' Association was held at 6:15 p.m., November 10. Supper was served by Miss Myrtle Mackintosh, Miss Geraldine McGregor and Miss Dorothy Maxwell. After a short business meeting a very interesting demonstration of the autoclave was given by Miss Louise Simonson, and the meeting closed with a discussion.

The December meeting was held at 6:15 p.m., December 8. Twenty members were present. Miss Betty McAlpine, Miss Margaret O'Brien, and Miss Mable Owen served supper, after which Miss Jean Reid gave a very interesting and instructive demonstration on making the anaesthetic solution for dental purposes. A discussion followed.

—M. G. AULD.

SASKATCHEWAN:

Dental Nurses and Assistants

The Regina dental nurses and assistants met at the home of Major and Mrs. Gregor Smith to form a Dental Corps Auxiliary in connection with their Association and to try to get in touch with all dental nurses and assistants in the province for an organized war effort. Major Smith gave details of enlistments for Canadian Women's Army Corps and Canadian Dental Corps and an outline of what work nurses here could do for the Dental Corps overseas.

Refreshments were served, Mrs. Smith pouring tea, assisted by Mrs. N. Scott. Others present were: Mrs. C. Thacker, Mrs. O. Blake, Mrs. S. Julei and Misses Betty Wright, Marjorie Frain, Wilma Wagg and Bea Bobier.

RUTH MORRISON, *Press Reporter*.

MANITOBA:

Manitoba Dental Association

At a dinner meeting in the Fort Garry Hotel on December 2 an unusual opportunity was afforded the 80 members present, of meeting one of the most prominent British dentists, Dr. A. E. Rowlett, of Leicester.

Dr. Rowlett is a past president of both the British Dental Association and the International Dental Federation of which he is now treasurer. Dr. Rowlett has been in the United States for the past two months representing the British Dental Association and the British Ministry of Health, seeking information which may be of service in adjusting post-war dental problems in Britain. He speaks and writes French and German fluently and is an author of considerable distinction along the line of scientific dental and social economic questions. He has travelled widely and readily adapts himself to any company and environment. The morning he arrived in Winnipeg he was greeted at the Union Depot by a huge crowd including the Lieut. Governor, the Premier, and a large delegation with a brass band which incidentally had come down to greet the Blue Bombers on their return from "cleaning-up" the best the East could produce on the rugby field. Dr. Rowlett had already fraternized with the Bombers on the train from Toronto and having had a lot of bombing in England in the past two years was ready for anything Canada could produce. By the time he reached Vancouver and Victoria he was very much at home as they had just begun their blackout which unfortunately interfered with the attendance at his meetings in the two cities. The interest displayed in Dr. Rowlett's addresses across Canada was no doubt largely due to the evident sincerity of the speaker as he described conditions as they exist in Britain. There was no attempt to either over or understate facts. The underlying thought of most importance to the dental profession, stressed by Dr. Rowlett, was the necessity of thorough and efficient national dental organization that we may be prepared to speak as with one voice when circumstances demand it. The dinner and meeting was presided over by Dr. A. E. Proctor, President of the Manitoba Dental Association.

Winnipeg Dental Society

Once again the Winnipeg Dental Society is indebted to the University of Toronto for the lecture and table clinic given on the 12th of December in the Fort Garry Hotel by Dr. Ante, one of the Faculty of Dentistry's best teachers and demonstrators.

The clinic began promptly at 4 P.M. and continued until late in the evening with time off for a turkey dinner which was attended by a record crowd of about 70.

Dr. Ante's announced topic was partial dentures, this subject being selected because recent clinics have been devoted to full dentures. However the clinic had not been long on the way before full dentures came to the surface and probably as much time was given to impression taking for full lowers as to the partials. Dr. Ante now has an improved method for full lower impressions which would seem to have quite superseded the plastic wax technique demonstrated through the West about three years ago.

Dr. E. J. Robb, the President of the Society, was in the chair.

Dental Nurses and Assistants

The Christmas meeting of the Winnipeg Dental Nurses' and Assistants' Association was held on December 1 in the Green Room of the St. Regis Hotel with the President, Miss Jean Gordon, in the chair. This was the annual open meeting and Miss Ann Thompson, social convener, had arranged an excellent program. This included a piano solo by Miss Aileen Warren, dance numbers by the Hoffer Sisters and a reading by Miss Evelyn Bell. Impromptu speeches, a quiz contest and a brief sing song brought an altogether enjoyable evening to a close.

ONTARIO:

Workman's Compensation Board of Ontario

NEW RULING RE DENTURES

The Board orders that in those cases where a workman suffers facial injury of such severity as to be expected to damage natural teeth, and such injury causes damage to an artificial denture while same is in place in the workman's mouth, such dentures may be replaced or repaired in the medical aid provisions of the act.

Ladies' Auxiliary

The Ladies' Auxiliary to the Academy of Dentistry and the Canadian Dental Corps M.D. 2, held a meeting Nov. 20 in Eaton's Round Room. Mrs. S. Stuart Crouch presided. Dr. A. J. McDonagh spoke on behalf of the Canadian Oral Prophylactic Association and presented the Auxiliary with a cheque of \$50.00 for war work. Mrs. J. W. McDonald, convener of Christmas boxes, reported 105 sent overseas. Each contained edibles and woollens supplied by the wool convener, Mrs. A. J. McDonagh. Mrs. G. Grieve, sewing convener, reported work being done on units for the Red Cross. A report of \$312.00 was given on the first collection of scrap gold, which was donated by patients to help the war effort. Mrs. R. Freestone, accompanied by Mrs. H. A. Livingstone, sang. Mrs. A. E. Webster moved a vote of thanks.

On Nov. 24 the Ladies' Auxiliary presented the Toronto Women Teachers' Choir, directed by Mae Skilling Mason, assisted by Joe Pach, boy violinist, in Eaton Auditorium. Mrs. Harold Skilling was convener of this event. The net proceeds of \$560.00 were in aid of the Canadian Dental Corps.

On Dec. 4 the executive of the Auxiliary held a tea and reception for members and their friends at the home of the president, Mrs. S. Stuart Crouch.

I.O.D.E. Donate Funds for Dental Clinic

The Angela Bruce Chapter, I.O.D.E., voted the sum of \$200 for the starting of a dental clinic in the schools of Oakville, at its meeting on December 15.

Ontario Dental Nurses' and Assistants' Association

ESSEX AND KENT COUNTY CHAPTER: The dental nurses and assistants of the Essex and Kent County Chapter met on December 1, in room 308 of the Canada Building.

The business session was conducted by the President, Janet Hamel. Encouraging reports were heard from the Raffle Convener and the War Fund Convener. Arrangements were made for a Christmas party which will take place at the home of the President on December 15.

Miss Hilda Layman, Health Instructress at

the Windsor Vocational School, gave a thoroughly enjoyable talk on "Health Education." A vote of thanks was presented to Miss Layman by Barbara Wood.

WINNIFRED GRIER, *Sec.*

HAMILTON CHAPTER: The members of the Hamilton Chapter of the Ontario Dental Nurses' and Assistants' Association were the guests of the Hamilton Dental Association at a dinner meeting in the Mural Room of the Royal Connaught Hotel on the evening of December 8.

Dr. Rene Rochon, Associate Professor of Operative Dentistry and Director of Clinics, University of Detroit, School of Dentistry, addressed the meeting on, "Radiodontic Technique."

GERTRUDE KIDNER, *Sec.*

KITCHENER DISTRICT CHAPTER: Fourteen members of the Kitchener District Chapter met at the Cutten Golf and Country Club in Guelph on November 4. The nurses and assistants of Guelph arranged the meeting and acted as hostesses for the evening. Edith Inkster presided.

The guest speaker, Miss Hunt, Secretary of the Y.W.C.A. War Service Association, gave a very interesting and informative talk on the general routine of Hostess Houses and her duties there.

RUTH CLARK, *Sec.*

LONDON DISTRICT CHAPTER: The monthly meeting of the London Chapter was held in the form of a dinner meeting at Wong's Café on December 1.

The members were privileged to have as their guest the Provincial President, Tomye Turner, of Toronto. Mrs. Turner was introduced by Dorothy Innes, President of the London Chapter.

A most successful rummage sale was sponsored by the members on December 4. The proceeds will be devoted to war work.

RUTH WALKER, *Sec.*

NIAGARA DISTRICT CHAPTER: On December 1 the members of the Niagara District Chapter met at the home of Helen MacFarlane in St. Catharines.

The President, Mary French Thompson, introduced Mrs. Marion Edwards, of Toronto, who spoke on "Parliamentary Law and Procedure."

News from the Provinces

During the business session, the Niagara District Chapter presented a cheque for \$15.00 to the Provincial War Fund. It was accepted by Mrs. Edwards, Provincial War Fund Convener. Kay Mason of St. Catharines won the draw for the war savings stamp.

MADeline COOMBS, *Sec.*

SARNIA DISTRICT CHAPTER: The Vice-president, Aileen Palmer, presided at the December meeting of the Sarnia Chapter which was held in the office of Dr. W. A. Hartley, on December 1.

A letter of acknowledgement was read to the members for their contribution of \$5.00 toward the issuance of the Bulletin of the Ontario Dental Nurses' and Assistants' Association. An invitation was extended to all members to attend a Christmas party on December 10 at the home of the President, Vera Dyer.

The business meeting was followed by a round table discussion on "Office Routine."

HELEN WYNNE, *Sec.*

SUDBURY DISTRICT CHAPTER: The Sudbury dental nurses and assistants held their regular monthly meeting in the Capitol Theatre Building on December 1, with Ina Leikas presiding.

Plans were discussed for a Christmas party which will be given for the children of the Sudbury Shelter.

A committee was elected to assist Ina Leikas with her duties as Convener of the Burr Guessing Contest. This contest will be a feature of the Provincial Convention next May.

MARY KENNEDY, *Sec.*

TORONTO CHAPTER: Dr. G. V. Morton, of Toronto, was guest speaker at the meeting of the Toronto Chapter which took place on December 1, at the Royal York Hotel. Many applicable ideas were presented by Dr. Morton in his paper, "Records and Bookkeeping, Credits and Collections."

The meeting, presided over by the President, Irean Checkley, was opened with the singing of "God Save The King."

Claire Routledge, Social Convener, announced that the annual banquet of the Toronto Chapter would be held on February 2, at Diana Sweets. The Patriotic Donators and Knitters Club presented a Christmas cheque to the Canadian Dental Corps.

On December 3, the members of the Academy of Dentistry, held their Winter Clinics at the Royal York Hotel. Clinics were given by doctors, nurses and assistants. Several members of the Toronto Chapter participated in and attended this clinic meeting.

KATHLEEN SIMPSON, *Sec.*

Tomye Turner, President of the Ontario Dental Nurses' and Assistants' Association, called a special meeting of the Provincial executive on December 2, in Toronto.

The resignation of Jean Steele Boland, who is no longer an active dental assistant, was presented and accepted. The members of the executive appointed Dorothy Scott, of Windsor, to serve as Vice-president for the remainder of the term.

FERNA LEECH COOK, *Publicity Convener.*

Dental Nurses' Alumnae

The December meeting of the Dental Nurses' Alumnae Association was held at the Women's Union, 79 St. George St., Toronto, with Anna Lindsay presiding. Plans were made for a bridge on February 3, the proceeds to go to the Alumnae Mobile Unit Fund.

Over 100 beautiful gifts of warm clothing which were on display are to be given to the Red Cross unit of the University of Toronto to be sent to the British War Victim Babies in Britain.

The nurses in training at the Faculty of Dentistry were guests of the evening. Audrey Kribs, social convener, took charge of games and singing of Christmas carols. Mary Hopkins, accompanied by Margaret Robinson, entertained the girls with music. Refreshments were served.

HELEN MCKINLEY, *Cor. Sec.*

Toronto Academy of Dentistry

The "Winter Clinic" has become a much anticipated feature of the Academy program. Dr. L. M. Grose as director and Drs. Gordon Chalmers, W. K. Prendergast and Fred A. Flora constituting the committee in charge, are deserving of high praise for the arrangements of the day. Their efforts were rewarded by the biggest attendance yet recorded. Members of the profession came from many outside points to be guests of the Academy and benefit from the program presented. Here are the features during the day—

The Journal of The Canadian Dental Association

1. Plastics as applied to Restorative Dentistry—Messrs. Nelson and Kramer of Royal Oak, Michigan.

2. Crown and Bridgework — Dr. Frank Martin, Toronto.

3. Oral Surgery—Dr. Carl Moyle, Hamilton.

4. Full Dentures—Dr. John A. Bothwell, Toronto.

5. Periodontia—Dr. Murray Robb, Toronto.

6. Preservation of the Pulp Involved Tooth —Dr. Geo. C. Hare.

7. Amalgams—Dr. E. T. Guest, Toronto.

8. Surgery and Anesthesia — Dr. W. B. Amy, Toronto.

9. Impressions of the Edentulous Mandible —Dr. Irvin H. Ante, Toronto.

10. Orthodontia—Drs. Corrigan, Fisk and Crouch.

11. Protection of Enamel by Special Fatty Acid Film—Dr. H. K. Box.

In the evening a series of table demonstrations were given by dentists, dental nurses and assistants, and dental dealers and manufacturers. This period was quite informal, allowing for friendly discussion and an opportunity to learn a new technique, another fellow's way of doing something, a handy practical hint for the office as well as newer materials stocked by the supply houses.

Wednesday, December 3rd, will be remembered as a great day by those who called off all appointments and attended this splendidly arranged program.

Toronto Dental Technicians

Members of the Toronto Study Club of Dental Technicians were entertained by Messrs. Handy and Harman of Canada on the evening of November 19th. There were 23 members present from Toronto with guests from Oshawa, Simcoe, Hamilton and Woodstock. The firm of Handy and Harman are known widely as processors of precious metals for use in the arts and industry and the opportunity to see something of the preparation of precious metal alloys proved most interesting.

Mr. A. E. Rowlett, L.D.S.

Many Canadian dentists who attended the British Empire meeting in Toronto in 1932 will remember the cultured, smiling, congenial

Mr. Rowlett, a member of the British delegation. He has been visiting Canada again. He was the official representative of the British Dental Association at the convention of the American Dental Association held in Texas last November. After the meeting he visited Washington, then came to Canada.

The purpose of his visit, as he has intimated, is to observe and study existing plans of dental services in United States and Canada so as to take back to the British Ministry of Health the information he has gathered.

On November 21st Mr. Rowlett came to Toronto and was tendered an informal dinner at the Granite Club under the auspices of the Royal College of Dental Surgeons, Ontario Dental Association and the Academy of Dentistry. Dr. S. A. MacGregor, President of the Academy, acted as toastmaster. A delegation of twenty odd members of the Hamilton Dental Society came to Toronto, others came from Oshawa and other places to join their Toronto colleagues to see and hear Mr. Rowlett and do him honour. The Hon. Dr. H. J. Cody, President of the University of Toronto, Col. Nasmith of the Canadian Red Cross who very recently returned from England, Dr. Bernard McGhie, Deputy Minister of Health, and Mr. Greaves, British Trade Commissioner, were specially invited guests who came to visit with our distinguished colleague from England.

After dinner had been served Dr. Arthur Ellis introduced Mr. Rowlett who spoke to those assembled as to a group of personal friends. True to the type of English gentleman he is, he did not dwell on the vivid details of deprivation, destruction and hardship but made light of these. " 'England can take it' makes a good newspaper headline," he said, then inferred we are only humans and continuing, he said, "Yet no one grumbles." He spoke of rations of wearing apparel and food, the absence of luxuries such as tobacco, candy and fresh fruit, the scarcity of gasoline and so forth. He spoke of blackouts and bombing and the preparation to take care of casualties and changes brought about in private and industrial life as a result of the war. Finally he spoke of dentists in England and their tasks in these days and the days to come. In concluding his address the speaker offered a challenge—"Dentistry is a great profession. It

is a science as well as an art, a science engaged in the search of truth. Absolute truth must be searched for its own sake and not for thought of gain. So let us be sure of our own destinies. Let us work according to our capacities and confront the realities of to-day."

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Woodstock

Friday, December 5th, was Public Dental Health day in the city of Woodstock. Messrs. H. J. Hodgins, H. S. Thomson and T. R. Marshall were guests of Woodstock Boards of Health and Education. The day's program was arranged by Miss Jackson, public health nurse, in co-operation with Woodstock civic officials, dentists and other public health minded people of the city. Miss Jackson is to be commended for the thoroughness with which she pursued her task. The success of the day seemed to be ample compensation.

Four meetings constituted the day's activities. In the morning Dr. Marshall addressed nearly 1000 secondary school students. At 3.00 o'clock Dr. Thomson addressed a similar number of primary school children, after which Dr. Marshall projected the Ontario Dental Association sound film, "Billy's Trip to Healthland". In the evening a public meeting was arranged where both Dr. Marshall and Dr. Thomson gave addresses.

At noon a complimentary luncheon was tendered to the visitors, at which Mr. R. A. MacDougall, Chairman of the Board of Health, presided. Mayor Hayball, Mr. Hutcheson, Chairman of the Board of Education, and Dr. R. L. Revell, accompanied by a number of his colleagues, were present with 40 other citizens representing many official bodies and organizations in the city and surrounding districts. Dr. Harry S. Thomson gave a splendid address at this meeting, one which won for him much comment of approval. The dentists of the city did all they could to make the visit of their Toronto colleagues a pleasant one.

Dr. Hodgins represented the Department of Health of the Ontario government as its Director of Dental Services. Dr. H. S. Thomson represented the Canadian Dental Hygiene Council and Dr. T. R. Marshall the Ontario Dental Association as Chairman of its Public Dental Health Committee. The joint committee of the Board of the Royal College of Dental

Surgeons, the Canadian Dental Hygiene Council and the Ontario Dental Association, which is directed by Dr. R. D. Thornton, sponsored the visit of the Toronto men to Woodstock.

QUEBEC:

Testimonial Dinner

On September 26, at the Mount Stephen Club, a Testimonial Dinner was given to three distinguished retired gentlemen of the Teaching Staff of McGill University. There were present some eighty graduate dentists and friends.

After a splendid dinner, the Chairman of the event, Dr. Jack Dohan, read a very interesting paper on "The Early History of Dentistry in the City of Montreal," and very ably brought in the names of our honoured guests.

Dean A. L. Walsh rendered a fine testimony to Professor Frederick G. Henry, who was Professor of Dental Materia Medica from 1905 to 1920. From 1920 to 1937 he was Professor of Dental Pathology and Therapeutics.

Dr. A. W. MacClelland very ably gave an excellent testimony to Frederick Hamilton Acheson Baxter who was a member of the Staff of the Dental School of McGill University from 1908 when he demonstrated on Prosthetic Dentistry and Crown & Bridge Work. In 1911 he was made lecturer in Dental Histology and Dental Surgery, and from 1917 to 1941, Professor of Operative Dentistry. From 1928 to 1937 he taught Periodontia to fourth year and Root Canal Therapy to the third-year students.

Dr. Prescott Mowry read a very fine testimony to Professor George S. Cameron, who was a member of the staff of the Dental School of McGill University from 1909. During that year he was Demonstrator of Operative Technique and Operative Dentistry. From 1910 to 1914 he was Professor of Prosthetic Dentistry and Metallurgy and in 1914 he continued his work as Head of the Prosthetic Department until 1936.

Many telegrams of congratulation were received and read during the course of the evening. One very interesting one was received from a group of Officers who are serving Overseas in the Canadian Dental Corps.

The three honoured guests were presented with beautiful silver trays in part recognition

of their services which they had rendered so faithfully and devotedly.

The meeting was a most successful and memorable one.

Montreal Dental Club

On October 15 at the Atwater Badminton Club the Montreal Dental Club held its annual meeting and dinner. Dr. K. Carver, the retiring president, read a very fine report of the Club's activities which occurred during his term of office as president. The financial report was read by the Club's treasurer, Dr. B. Bell. It was an excellent report showing that the Club's finances were in fine order.

The following officers were elected for the year 1941-42: President, Dr. A. D. Angus; Honorary President, Dr. K. Carver; Vice-president, Dr. J. C. Flanagan; Secretary, Dr. Wm. Swetnam; Treasurer, Dr. B. Bell; Executive Committee: Dr. Paul Marchand, Dr. R. Dagg, Dr. N. L. Martin, Dr. A. W. Mitchell, Dr. Gordon Leaky, and Dr. H. C. McNabb.

On November 17 at The Mount Stephen, the Montreal Dental Club had as its guest speaker Mr. Alfred E. Rowlett, of Leicester, England. Mr. Rowlett is a past president of the British Dental Association and was an honoured guest of the American Dental Association at its annual meeting in Houston, Texas.

In 1940 he represented the British Dental Association at the Centenary Dental Meeting in Baltimore. He was appointed an honorary member of the A.R.P.A. international in recognition of the eminent services he has rendered to the profession.

The Montreal Dental Club was fortunate in having Mr. Rowlett address it and give first hand information on conditions affecting our profession during these strenuous times in England.

There was a very good attendance including many members of the Canadian Dental Corps.

Mount Royal Dental Society

The members of the Mount Royal Dental Society were privileged in having a series of lectures and clinics on Periodontia presented to them by Dr. D. P. Mowry. The clinician, a well-known Montreal periodontist, is associated with the teaching staff of the dental school at McGill University.

The subject of Dr. Mowry's clinics was "A

Progressive Study on the Local Aspects of Periodontoclasia." Four meetings were held during October and November. In the afternoon sessions, the clinician gave practical demonstrations on patients of various phases of his subject, and in the evening of each meeting there was a lecture, illustrated with slides, explaining the physiology, the pathology, the histology, and the theory and rationale of treatment for the cases treated that afternoon.

At the opening dinner Dr. Mowry introduced his course to the Society and issued to each member pamphlets outlining treatment, medications, instruments, etc.

The practical cases treated over the four meetings were:

- (1) Detailed Prophylaxis.
- (2) Surgical Treatment of a Pyorrhea Pocket.
- (3) Balancing of a Traumatic Occlusion.
- (4) Treatment of Vincent's Infection.
- (5) Resection of Gum Tissue.

Dr. Mowry proved to be an excellent teacher. His sincerity in stressing certain points, and his keen interest in the work made it an easy matter for the members to obtain a comprehensive knowledge of the case being demonstrated. The response to the clinician's efforts was well exemplified by the fact that the average attendance at the meetings was one of the largest ever had by this Society.

At the dinner held on the final meeting day, Dr. A. S. Soloman, on behalf of the Society, presented to Dr. Mowry, a suitably engraved gift in appreciation of his sincere efforts. The president, Dr. L. J. Rosen, who was largely responsible in arranging the course, thanked our guest for a grand contribution to 'progressive dentistry'. It was felt that the local community would indirectly benefit by Dr. Mowry's teachings.

NEW BRUNSWICK:

Saint John Dental Society

The dentists of Saint John held a meeting at the Admiral Beatty Hotel and reorganized the Saint John Dental Society, electing to office the following: President, Dr. A. J. Coughlan; Vice-president, Dr. J. R. Hutchison; Secretary, Dr. L. A. Langstroth; Treasurer, Dr. Howard W. MacDonald; and additional members of the Executive, Dr. W. C. Caruthers and Dr. J. B. O'Brien.

BRITISH COLUMBIA:

Resolution

Resolution passed unanimously by the Council of the College of Dental Surgeons of British Columbia on November 23, 1941:

"That the Council of the College of Dental Surgeons of British Columbia make a grant to the Canadian Dental Association for 1942 of four dollars per member of the College actively engaged in the practice of dentistry in British Columbia, which amount be paid in full on March 15, next.

"That the Council of the College of Dental Surgeons of British Columbia do not make any commitments for 1943 until all of the legal bodies in Canada has made bona fide pledges to make grants to the Canadian Dental Association of four dollars for each member thereof."

The "Blackout"

The clouds of war have shadowed the Pacific Coast with actual reality. The 'Blackout' disrupted the later hours of the day. But by now all precautions have been taken and we are ready to blacken out with the sound

of the siren. The co-operation of the people here in carrying out the military commands is wonderful.

Vancouver Dental Society

Dr. Roy West, of Seattle, Washington, was the guest speaker at the monthly meeting of the Vancouver Dental Society. He gave a graphic description of his recent visit to South America, where he was a guest of many of the countries.

Dr. West's coloured films of "Simplified Exodontia Technique" are very instructive and the photographic technique excellent. This type of presentation of subjects, with running commentary, is a wonderful advancement in teaching.

Study Clubs

The Vancouver Study Clubs are in full swing. The Ferrier Gold Foil Club meets one afternoon and evening each month—operating in the afternoon and analysis during the evening. The Prosthetic Club meets every week, while the Diagnosis Club meets twice a month. Real interest is being shown by the profession in these activities.

EMPIRE NEWS

GREAT BRITAIN:

Anglo-Russian Medical Co-operation

The British Association has organized a conference between representatives of Britain and the Empire, the United States, Soviet Russia and China, to "demonstrate the common purpose of men of science in ensuring a post-war order in which the maximum benefits of science will be secured for all people." M. Maisky, the Soviet Ambassador, who comes of a medical family, has expressed his warm interest when he attended a meeting called for the establishment of an Anglo-Soviet Medical Committee.

No doubt the dental side of this effort will receive the support of the profession, and it is to be hoped that translations of medical and dental literature will be available for publication in both countries.—*Dental Record*.

AUSTRALIA:

Australian Dental Association

The Association consists of six constituent bodies, namely, the six State branches. Each

State is represented in the Association by two duly appointed delegates.

The efforts of the Association during the war have been largely concentrated in assisting the dental services of the Army, Navy and Air Forces and endeavouring to ameliorate the great difficulties imposed by the restricted importation of dental supplies.—*D. Jour. of Aust., Nov., 1941*.

N.S.W. Dental Health Poster Contest For School Children, 1941

This contest, which was inaugurated in 1939, has now become an annual fixture, open to the pupils of all secondary and super-primary schools in the State. Prizes of £1 10s., 10s., and 5s. were given in each group.—*D. Jour. of Aust., Nov., 1941*.

NEW ZEALAND:

New Zealand Dental Corps

No recruit for the New Zealand Armed Forces enlisted for war, who is otherwise medically fit, is rejected for dental reasons,

and it is the responsibility of the New Zealand Dental Corps to record his dental condition on entry to Camp or Station, and to render him dentally fit before embarking overseas, whether Navy, Army or Air.

At mobilization camps dental treatment for 2nd N.Z.E.F. and all other full-time personnel is carried out in the various Camp Dental Hospitals, each of which is commanded by a Principal Dental Officer. The establishment allows for one Dental Officer to 200 men together with the requisite number of Warrant Officers, N.C.O.'s and other ranks composed of dental orderlies, clerks, and dental mechanics where overseas personnel are involved, otherwise the ratio is one Officer to 600 men.

All New Zealand soldiers are dentally fit when they leave New Zealand, but between 50 per cent and 60 per cent of them are wearing artificial dentures, and rely upon these to assimilate their daily rations. Under the strain of active warfare artificial dentures are readily broken and as easily lost, and the wearers must be considered as potential

casualties unless facilities for the supply and repair of dentures are available as close as possible to the front line. The same applies to recurring dental defects, for there is nothing like dental pain to weaken a man's morale. The Section maintains the rifle strength in the line by eliminating dental pain and ensuring that dentures are replaced and repaired while the soldier is still kept on the strength of his Unit.

The following is a summary of dental treatment carried out for the New Zealand armed forces:—

NEW ZEALAND (up to 31st May, 1941):

Number rendered dentally fit	51,761
Fillings	195,569
Extractions	64,244
Scalings	19,327

ARTIFICIAL DENTURES:

Full Dentures	7,973
Partial Dentures	3,632
Remodels	4,574
Repairs	6,577
Total Denture cases	22,756

—*N.Z. Den. Jour.*, Sept., 1941.

GENERAL NEWS

Journal of the Canadian Dental Association as Official Organ

The following dental organizations in Canada have officially adopted the *Journal of the Canadian Dental Association* as their official organ:—

Nova Scotia Dental Association.
Halifax Dental Society, N.S.
Regina Dental Society, Sask.
Saskatchewan College of Dental Surgeons.
Calgary Dental Society, Alta.
Moose Jaw Dental Society, Sask.
Saint John Dental Society, N.B.
Victoria Dental Society, B.C.
Vancouver Dental Society, B.C.
Winnipeg Dental Society, Man.
Manitoba Dental Association.
Alberta Dental Association.
Dental Association of Prince Edward Island.
Toronto Academy of Dentistry, Ont.
London Dental Society, Ont.
British Columbia Dental Association.
Edmonton Dental Society, Alta.
Saskatoon Dental Society, Sask.
Lethbridge Dental Society, Alta.

Eastern Ontario Dental Association.

New Brunswick Dental Society.

Montreal Dental Club, Que.

Mount Royal Dental Society, Montreal, Que.

Royal College of Dental Surgeons of Ontario.

Full Credit Given to Individual Authors

The Periodontia Department of New York University College of Dentistry cordially invites each investigator in the field of periodontal disease who has published a paper or papers containing the results of either laboratory research or clinical observations which bear directly or indirectly upon the aetiology or treatment of periodontal disease in man or animals (1) to submit a concise summary of those of his papers which he deems to be his basic contributions to this field and which he considers to be in agreement with his present thinking, or with his experience and thinking up to a time specified by him; and (2) to cite the location and time of appearance of such paper or papers which contain such basic findings; also (3) to enclose any

additional statement that may seem necessary to him to amend the foregoing statements so that they more accurately reflect his present opinions.

These summaries will, therefore, contain only present opinions, rather than the total results of each worker's endeavours which may, in addition, include errors, duplications, altering viewpoints, etc. The compilations of such summaries which will *contain the essence of each investigator's present thinking will then be published in book form* and will, therefore, not be a series of abstracts of papers on either the aetiology or treatment of periodontal disease.

The summary should be in our hands not later than March 15, 1942. (209 E. 23 St., New York, N.Y., U.S.A.)

Osteopaths Must Study

Thirty hours of postgraduate study must be completed each year by California osteopaths before their licenses will be renewed, according to the provisions of a new law passed by the State Legislature and signed by Governor Olson. The measure was introduced at the request of the California Osteopathic Association.

The progressive and alert dentist needs no urging to pursue postgraduate study. He knows that by broadening his knowledge and developing his skill he will be able to serve his patients and in so doing, improve his own position spiritually, professionally and economically. He knows also that he cannot remain static and that he must go ahead or he will surely slide backward.—*N.Y. Jrl. of Dentistry*.

Mr. A. E. Rowlett's Visit to Western Canada

The dentists of Western Canada were greatly pleased that Mr. A. E. Rowlett, of Leicester, England, was able to rearrange his plans at the last minute in order to make a trip through this part of Canada.

With a week's notice meetings were planned in Winnipeg, Manitoba; Regina and Saskatoon, Saskatchewan; Edmonton and Calgary, Alberta; and in Victoria and Vancouver, British Columbia.

The meetings in B.C. were interfered with as the result of the blackout which had just

come into effect, but in all other centres splendid meetings were held. As a result the dentists of Western Canada have a clearer picture of war conditions in Britain and of the Empire viewpoint in dental affairs.

Mr. Rowlett spoke in several places in Ontario and Quebec before going west.

Dr. Woodbury, President of the Canadian Dental Association, has written Mr. Senior, Secretary of the British Dental Association, expressing the appreciation of the dentists of Canada for Mr. Rowlett's contribution to Canadian dentistry.

Health For Morale—Have Your Teeth Fixed NOW Says December "McCall's"

Writing "There's No Shortage on Glamour" in the December issue of McCall's Magazine, Maxine Davis, well known reporter of women's news, urges McCall's over three million readers to have their teeth fixed immediately. Considering the general problem of health in these trying times, Miss Davis points out that we must be healthy to work, that health is the first essential of good morale.—*N.Y. Jour. of D.*

Survey of Dental Incomes

The Committee on Dental Economics of the A.D.A. in co-operation with the United States Department of Commerce, is planning to make a survey of the incomes of dentists. In addition to seeking information relating strictly to income, an attempt will be made to learn something about office organization and conduct of business among the profession. Certain general social data regarding the dentist and his family will also be sought. It is planned to send questionnaires to the entire dental profession sometime during the month of January. The Committee recognizes that many persons will be hesitant to participate in a survey of "income," and wants to give complete assurance that every return will remain completely anonymous.—*A.D.A. Release*.

Second Congress on Dental Education and Licensure

The Council on Dental Education will conduct a Second Congress on Dental Education and Licensure at the Palmer House in Chicago on Saturday, February 21, 1942. Two papers will be presented at the morning session, one

by a dental teacher and one by a dental examiner. A speaker of national prominence will address the luncheon session. Two papers will be presented at the afternoon session dealing with the design of the dental curriculum. One paper will be devoted to the subject from the standpoint of integration with medicine and the other, from the standpoint of autonomy in administration and teaching. —A.D.A. Release.

Tons of Medicine Rushed to U.S.S.R.

Chairman Norman H. Davis of the American Red Cross announced he had given instructions to forward immediately 800 tons of medical supplies now in England to the U.S.S.R. Through the co-operation of the British Red Cross, to which these supplies were consigned, immediate shipment is being

made. The supplies will be replaced to the British Red Cross by similar stocks from the United States.

Coincident with this immediate aid to the war-wounded soldiers and civilians in Russia, Chairman Davis announced that an additional \$250,000 worth of medical supplies will be sent direct from the United States to Russia. A shipment from this purchase is en route, containing hospital garments, surgical dressings, and large quantities of insulin and gas gangrene serum and antitoxin. The remainder of the \$250,000 worth of supplies now is being gotten ready at American ports for shipment. This will include drugs of all types, five million surgical dressings, quantities of surgical instruments and other hospital supplies.—*California and Western Medicine*. Vol. 55, No. 5, 11/41; per A.D.A. Release.

IN MEMORIAM



MAJOR JOHN ALEXANDER KERR

John Alexander Kerr was born in Scotland, December 19, 1902. He was graduated from McGill University, May, 1926, and was Clinical Assistant in Exodontia in the Montreal General Hospital 1927-1928.

He practised for two years with Major

Ross Cleveland in Montreal and then conducted his own practice in Granby, Quebec, from 1931-1939, during which time he took an active interest in the N.P.A.M. serving with the 24th Field Battery R.C.A. where he gained his Commission. He enlisted for Active Service with the Canadian Dental Corps on October 7, 1939, and was immediately appointed Adjutant of No. 4 Company. He proceeded overseas in June, 1940, where he became Adjutant of No. 2 Dental Company and was promoted to the rank of Major just prior to his death which occurred as the result of a motor accident in England, November 30, 1941.

Major Kerr is survived by his wife and two daughters who reside in Westmount, Quebec.

The Canadian Dental Corps and the entire profession express heartfelt sympathy for the family in their bereavement.

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Ole A. Branfladt, of Alaska, aged 54, died in November. Using dog teams and later aeroplanes Dr. Branfladt visited practically every village on Alaska's northern coast, and made long trips to isolated trappers' cabins and Eskimo huts to render dental service.

. . . SECTION FRANÇAISE . . .

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Armand Fortier, D.D.S.

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ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516 est, rue Sherbrooke, Montréal, Québec

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Aires, Argentine

L'Evolution de l'Anesthésie*

par M. le Docteur Pierre ROLLAND

Ancien Chef de Laboratoire à la Faculté de Médecine.
Lauréat de l'Académie et de la Faculté de Médecine.

Dans une revue rapide de l'histoire de l'anesthésie, l'auteur montre les grandes étapes de l'évolution de cette science médicale.

Il insiste plus particulièrement sur les différents procédés d'anesthésie et d'analgesie de base qui constituent l'apport de ces dernières années.

L'analgesie complémentaire, en particulier, paraît destinée à trouver une large place en art dentaire et en chirurgie maxillo-faciale.

A une époque où tout va infiniment vite, *trop vite*, il peut paraître à beaucoup comme inutile de jeter un coup d'œil en arrière et d'essayer de marquer les grandes étapes de l'anesthésie et de l'analgesie. Nous le ferons cependant, car rien n'est fécond comme les leçons du passé au point de vue de l'orientation des grands courants d'idées. C'est, à notre avis, le seul moyen de voir clair dans tout le fatras de prétendues découvertes qui naissent chaque jour et disparaissent le lendemain.

J'essaierai donc de vous brosser, aussi brièvement que possible, avec le minimum de noms et de dates, l'évolution de la lutte contre la douleur, à laquelle vous êtes obligés de participer chaque jour, presque à chaque instant.

(*) XIV^{es} Journées Dentaires de Paris: 24 au 27 Novembre 1938.

I. — L'ANESTHÉSIE DANS L'ANTIQUITÉ ET AU MOYEN ÂGE.

La pensée d'abolir ou tout au moins d'atténuer la douleur provoquée par un acte chirurgical ou un traumatisme quelconque remonte aux temps les plus reculés.

Il ne semble pas, cependant, que l'Antiquité ait connu l'anesthésie proprement dite. Les faits rapportés dans les Livres Parsis et dans le Talmud, par exemple, appartiennent plus à la fable qu'à l'histoire. Toutefois, il est possible que certains d'entre eux aient leur source dans l'observation des phénomènes que l'on rattache aujourd'hui à l'hypnotisme ou au somnambulisme. Les hommes ont connu, à toutes les époques, des moyens variés pour produire une sorte d'état extatique qui supprime la sensibilité et la douleur. Les moines grecs du Mont Athos y arrivaient par la contemplation prolongée de leur nombril; les fakirs de l'Inde regardaient fixement un point éclairé; de nos jours les Aïssaouas d'Algérie se soumettent longuement au bruit monotone de tambourins frappés suivant un rythme rapide.

Les Assyriens pratiquaient couramment la compression des veines du cou aux enfants auxquels on voulait enlever le prépuce parce que, disaient-ils, le sentiment et le mouvement étaient ainsi anéantis.

Au siècle dernier, le médecin autrichien Mesmer mettait également en œuvre, en y joignant une mise en scène compliquée, la fixation de la vue ou de l'ouïe, pour produire l'insensibilisation. Dès 1841, le chirurgien Braid, de Manchester, avait discerné le mécanisme de cette "anesthésie hypnotique"; il la réalisait simplement en faisant fixer longuement par le patient une boule brillante placée devant lui; il obtint ainsi avec certains sujets, une insensibilisation suffisante pour pratiquer des interventions chirurgicales. L'expérience reproduite en France par plusieurs chirurgiens tels que Broca, Verneuil, Lasèque, Tillaux, demanda, dirent les opérateurs, pour être réussie des sujets prédisposés qui n'existent qu'en petit nombre.

L'Anesthésie locale était cependant en germe dans certaines pratiques rapportées par Pline et par Dioscoride; ils parlent d'une "pierre de Memphis" qui, broyée et délayée dans du vinaigre servait à préparer des emplâtres insensibilisants. Il est probable que cette pierre était un carbonate qui dégageait du gaz carbonique sous l'action du vinaigre: une certaine anesthésie résultait du contact du gaz carbonique avec la peau. L'action insensibilisante de bains de gaz carbonique a été remise en honneur au siècle dernier par Brown-Sequard.

Si les anciens ont ignoré l'anesthésie, dans le sens actuel du terme, par contre ils ont connu les substances que nous appelons narcotiques ou stupéfiants. Tel était sans doute le népenthès dont parle l'Odyssée et qui avait le pouvoir de faire oublier la douleur. D'après les évangiles de Saint-Mathieu et de Saint-Marc, il était d'usage chez les Juifs, de donner un narcotique aux condamnés que l'on allait crucifier: le Christ, à qui l'on présentait le breuvage, le repoussa pour ne pas diminuer les souffrances de sa Passion.

La médecine ancienne ne donne que peu de renseignements sur ces préparations merveilleuses. On sait seulement que c'étaient le plus souvent, des préparations de suc de pavot: tel le fameux remède de la "colère et de la tristesse" des femmes de Thèbes, qui est demeuré dans la pharmacopée moderne sous le nom d'Extrait thébaïque.

Il semble que le Moyen Âge et la Renaissance aient utilisé également: le Lierre terrestre, le Suc du morelle, la Jusquiame, la Ciguë, la Mandragore, la Belladone, la Laitue, toutes plantes ayant une vertu léthargique plus ou moins caractérisée.

Enfin, si l'on s'en rapporte à un ouvrage publié en Chine au III^e siècle de notre ère, les médecins chinois auraient employé une préparation de chanvre pour insensibiliser les patients; il s'agit vraisemblablement de la substance que nous appelons le haschisch.

II. — LA DECOUVERTE DU PROTOXYDE D'AZOTE.

Nous devons cependant mettre en lumière les expériences réalisées par Beddoes et Humphry Davy, de 1795 à 1800 avec le Protoxyde d'Azote découvert en 1776 par Priestley.

H. Davy, âgé d'une vingtaine d'années, avait constaté dès 1799 que le Protoxyde d'Azote pris en inhalation pendant quelques minutes provoquait une sorte de tic nerveux et faisait disparaître la douleur physique, et il écrivait: "Le protoxyde d'Azote pur paraissait jouir entre autres propriétés de celle de détruire la douleur. On pourrait l'employer avec avantage dans les opérations de chirurgie qui ne s'accompagnent pas d'une grande effusion de sang".

Malheureusement, les résultats différents et inconstants obtenus en France, en Allemagne, en Suède et en Angleterre même, firent tomber dans l'oubli ces premières expériences pleines de promesses et reculèrent de plus de quarante années la mise en pratique de l'anesthésie générale.

C'est à un dentiste que revient la gloire d'avoir créé l'anesthésie moderne. Horace Wells, dentiste dans la petite ville de Hartford, de l'Etat de Vermont, aux Etats-Unis, est en effet, le premier à avoir eu l'idée d'appliquer les curieuses propriétés du Protoxyde d'Azote à la chirurgie dentaire. Le 11 décembre 1844, en présence de plusieurs témoins, il se faisait extraire une dent après avoir respiré le gaz insensibilisateur: à son dire, il n'en éprouva pas plus de mal que d'une piqure d'épingle.

III. — L'INTRODUCTION DE L'ETHER ET DU CHLOROFORME.

La méthode eut un retentissement considérable et suscita immédiatement l'essai de nombreuses substances gazeuses ou volatiles. C'est ainsi qu'un élève de Wells, Morton, associé au chimiste Jackson, fut conduit à appliquer les propriétés anesthésiques de l'éther à la chirurgie, peu de temps après les expériences de Wells.

L'éther qui avait, d'ailleurs, déjà fait l'objet de quelques applications de la part du médecin américain Crawford Long, se montra bien supérieur au Protoxyde d'Azote, du moins tel qu'on l'appliquait à l'époque. Morton et Jackson prenaient le 27 octobre 1846 un brevet leur assurant l'exploitation et les profits du nouvel anesthésique, qu'ils dissimulaient sous le nom de Léthéon.

Horace Wells conçut un vif dépit de voir sa méthode supplantée par celle de son ancien élève et sombra dans la démence. Le 14 janvier 1848, il s'ouvrit les veines dans son bain, tout en respirant des vapeurs d'éther pour se procurer une mort plus douce, suprême hommage rendu à la découverte de son ancien élève, devenu son ennemi.

L'anesthésie à l'éther se répandit rapidement en Europe, et Velpeau pouvait dire à l'Académie des sciences, le 1^{er} février 1847, que l'insensibilisation était de nature à "impressionner profondément, non seulement la chirurgie, mais encore la physiologie, voire même la psychologie".

Cependant un nouveau composé allait bientôt disputer la place à l'éther. Le chloroforme, découvert par Soubéiran en 1831, était expérimenté par Flourens en 1847 pour l'anesthésie des animaux: ce savant constata une action analogue à celle de l'éther mais bien plus énergique et plus rapide. Bientôt après, le chloroforme était introduit en chirurgie humaine par Simpson, de l'Université d'Edimbourg.

Ainsi, au milieu du XIX^e siècle, la chirurgie avait en mains les trois puissants agents qui sont encore aujourd'hui à la base de l'anesthésie générale.

IV. — L'ANESTHÉSIE LOCALE.

Si, comme on le raconte parfois, l'idée de l'anesthésie locale est due aux observations faites par Larrey pendant la campagne de Russie sur l'action du froid, il faut bien convenir que le chirurgien de la grande armée reconnaîtrait difficilement ses enfants dans les procédés actuels d'anesthésie locale.

L'anesthésie locale, par des procédés chimiques, date surtout de l'observation des propriétés physiologiques de la cocaïne. Cet alcaloïde, extrait de l'Erythroxylon Coca, arbrisseau de la famille des Linacées croissant au Pérou, en Bolivie, au Chili, dans la partie occidentale du Brésil et dans la République Argentine, est maintenant cultivé aux Indes Néerlandaises et à Madras.

Etudiée par Gardeke en 1855, Samuel R. Percy en 1857 et Niedmann en 1859, la constitution de la cocaïne ne fût connue définitivement qu'en 1923 lorsque Willstätter, Wolfes et Mader en eurent réalisé la synthèse totale.

L'origine de ses applications chirurgicales se trouve dans l'observation de l'ophtalmologiste Viennois K. Koller, qui reconnut en 1884 l'action insensibilisatrice de la cocaïne sur la conjonctive oculaire et sur la cornée.

La connaissance des groupes chimiques caractéristiques de la cocaïne, bien antérieure à celle de sa constitution définitive, avait incité les chimistes à réaliser synthétiquement des corps présentant des groupements analogues.

Ces travaux, dans lesquels devait s'illustrer Fourneau par la découverte de la Stovaïne en 1904, aboutirent à toute une gamme d'anesthésiques locaux synthétiques qui constituent un progrès considérable sur la cocaïne, parce que moins toxiques, plus maniables et n'ayant pas de propriétés soporifiques.

Nous ne citerons pas les autres anesthésiques locaux les plus employés actuellement; vous les connaissez tous, ils font partie de votre arsenal thérapeutique journalier.

V. — LES APPORTS DE L'EPOQUE CONTEMPORAINE.
L'ANESTHÉSIE DE BASE.

L'emploi des anesthésiques de base, en diminuant l'angoisse préopératoire, en raccourcissant la phase initiale de perte de la conscience et en permettant la diminution des doses d'anesthésiques volatils à inhaler, surtout s'il s'agit de l'éther, a grandement contribué à diminuer les dangers de l'anesthésie générale et en a amélioré le pronostic.

Claude Bernard, par la constatation qu'il fit dès 1869 de la surprenante action potentialisante obtenue avec la morphine au cours de l'anesthésie chloroformique chez le chien, peut être considéré comme le fondateur de l'anesthésie de base. Nussbaum devait, quelques années plus tard, mettre cette observation en pratique chez l'homme.

Desjardins, en 1905, rapportait un certain nombre de résultats obtenus avec la scopolamine, mais surtout considérée comme anesthésique général.

Walter, quelques mois plus tard, communiquait une série de cas personnels où la scopolamine n'était plus employée comme anesthésique total mais comme hypnotique préparatoire à la narcose avant l'inhalation de chloroforme.

L'emploi de la morphine et de la scopolamine ainsi institué devait se continuer jusqu'à nos jours en dépit de l'apparition d'un redoutable concurrent: *les barbituriques*, qui naissaient successivement et nombreux, avec leurs qualités et leurs défauts.

Les premières anesthésies chirurgicales, utilisant les barbituriques, furent faites en France par Daniel Bardet, qui utilisait en 1921 le Somnifène par la voie intraveineuse. Ce composé, mélange de diethyl et de diallylmalonylurée, avait l'inconvénient de provoquer un sommeil prolongé dépassant fréquemment 24 heures et pouvant atteindre plusieurs jours chez certains sujets particulièrement sensibles.

Une nouvelle formule fut alors proposée par A. Wiki qui remplaçait la diallylmalonylurée par l'isopropyl. Essayé par Perlis en obstétrique et par Fredet en chirurgie, les inconvénients restaient sensiblement les mêmes et le Somnifène fut abandonné pour l'un de ses constituants l'allylisopropylmalonylurée étudié par Fredet et connu sous le nom de Numal. Son injection était précédée elle-même d'une injection de morphine-scopolamine, et l'anesthésie complétée au protoxyde d'azote; cependant la période post-anesthésique reste fréquemment accompagnée d'une agitation violente qui ne peut toujours être pronostiquée et qui complique la surveillance des opérés.

Le pernocton ou S butyl-bromoprepényl-malonylurée fût introduit dans la pratique chirurgicale en 1927. Il fût employé sur une large échelle par Heim, en chirurgie et en obstétrique.

L'Amytal ou iso-amyléthyl-barbiturique entraînant des complications respiratoires et des paralysies vésicales assez fréquentes fût assez vite abandonné.

Le Sonéryl, étudié par Tiffeneau et Carnot en 1922 est le sel de soude de l'acide butyl-éthyl-barbiturique. Il fût utilisé par Desplas, Lannoy et Chevillon, d'abord *per os* en comprimés, pris la veille au soir et le matin de l'intervention, puis par voie mixte en faisant précéder l'injection, de l'administration *per os*, la veille, d'une certaine dose du même produit. Le réveil se produit assez rapidement et l'agitation post-narcotique est peu fréquente.

Cependant, à leur tour, les barbituriques devaient connaître une concurrence dans l'introduction dans la thérapeutique du tribromo-éthanol découvert par Willstatter et Duisberg en 1923 et introduit en France en 1927 sous le nom de Rectanol ou Avertine. Une abondante littérature au cours des cinq ou six années qui suivent témoigne de l'intérêt porté à ce produit.

Citons les travaux de G. Perrin, de Paul Giordan, de Max Thomson, de Bonsirven, etc...

Ce mouvement d'intérêt paraît se ralentir vers 1934: l'Evipan sodique vient, en effet, de faire son apparition à la suite des travaux de Weese. C'est le sel de soude de la cyclo-hexenyl-méthyl-N-méthylmalonylurée qui devait entraîner lui aussi pendant quelques années un mouvement de publications considérables.

F. Thierry, dans une thèse très documentée sur le sujet, pouvait fournir en 1935 près de 600 références. Utilisé d'abord comme anesthésique général de courte durée, puis comme anesthésique de longue durée, l'Evipan commence, à la suite de différents accidents dûs surtout à la grosse différence de sensibilité des sujets, à n'être plus utilisé que comme anesthésique de base ou plus exactement comme anesthésique de départ, ce que les Anglais appellent l'anesthésique starter.

L'Hypalène (cyclopentenylallyl-barbiturate de pyramidon), découvert il y a quelques années par R. Chaux, possède des propriétés analgésiques et hypnogènes précieuses dans la préparation des malades à l'anesthésie générale et locale, qu'il rend plus aisée en supprimant toute phase d'excitation préanesthésique, et plus profonde en potentialisant l'action de l'anesthésique utilisé. L'Hypalène est administré en comprimés ou en suppositoires.

Signalons enfin, pour compléter la liste, l'Eunarcon ou isopropyl-B-bromoallyl-N-méthyl-barbiturique, employé assez largement en Allemagne.

II. — L'ANALGESIE DE BASE.

Tout comme l'anesthésie de base complète et améliore l'anesthésie générale, les analgésiques de base peuvent compléter l'anesthésie locale, souvent insuffisante dans les cas de grosses interventions chirurgicales. Cependant, ce mode d'anesthésie qui

permet d'opérer un malade en évitant la perte de la conscience, ce qui est un avantage incontestable, le fait utiliser par des opérateurs de plus en plus nombreux.

Les agents analgésiques du type des barbituriques auxquels nous faisons allusion plus haut, ne conviennent pas ou mal comme adjuvants de l'anesthésie locale, en raison de leurs propriétés hypnotiques qui provoquent la perte totale de la conscience du patient et très souvent des réactions motrices gênant l'opérateur. Il a donc fallu se retourner du côté des analgésiques purs du type de la morphine, qui laissent les malades dans une euphorie subconsciente.

Par ailleurs, les physiologistes ont montré au cours de ces dernières années que la morphine outre son action analgésique centrale bien connue, agit sur les nerfs périphériques sensitifs. Killian et Schworer ont, en outre, démontré que cette action périphérique était potentialisée par celle des anesthésiques locaux.

Etudiée d'abord en Allemagne par Kirschner, la méthode fût appliquée en France par J.-C. Bloch, Pierre Rolland et R. Vieillefosse, grâce à une solution physiologiquement équilibrée de *morphine*, de *scopolamine*, d'*éphédrine* et de *narcotine*. Ce produit (Phlébafine) peut être utilisé aussi bien par la voie intraveineuse que par la voie sous-cutanée ou hypodermique.

L'action dépressive de la morphine et de la scopolamine sur le centre respiratoire et le cœur est corrigée par l'éphédrine et surtout par la narcotine à laquelle la Phlébafine doit son originalité.

Nous dirons, en passant, que la Phlébafine se montre également efficace dans l'anesthésie générale. Administrée avant celle-ci, elle supprime la période d'excitation et permet d'utiliser une quantité d'anesthésique infiniment moindre.

III. — LES NOUVEAUX ANESTHÉSQUES GÉNÉRAUX PAR INHALATION.

Un grand nombre de produits volatils ont été proposés au cours de ces dernières années.

L'*éthylène* a été employé pendant un certain temps en Amérique. Très hypertenseur, il n'est pas apparu comme très supérieur au protoxyde d'azote et fût très vite abandonné.

L'*acétylène*, surtout employé en Allemagne, ne paraît pas devoir prendre une grande place dans la pratique anesthésique. Il contient fréquemment, en effet, des impuretés qui le rendent toxique pour le foie.

Introduit aux Etats-Unis vers 1932-1934, le *cyclopropane* dernier né des anesthésiques volatils, commence à être employé en France depuis quelques mois, grâce surtout aux travaux et à la thèse de Sabourin. Son utilisation nécessite des appareils à circuit fermé avec absorption du gaz carbonique par de la chaux. Très inflammable et donnant avec l'oxygène des mélanges détonnants, il convient de le manier avec précaution.

Il se différencie du protoxyde d'azote par un pouvoir anesthésique plus grand qui est suffisant à lui seul pour n'importe quel type d'intervention. En contre-partie, il serait un peu plus toxique et on a signalé en particulier un certain nombre d'accidents cardiaques.

IV. — L'ANESTHÉSIE PAR INJECTIONS INTRAVEINEUSES OU PAR VOIE RECTALE.

Dans une étude très approfondie sur les différents procédés de narcose chirurgicale, Kirschner insistait en 1935 sur les avantages présentés par la combinaison de plusieurs médicaments et l'utilisation simultanée de différentes voies d'introduction dans l'organisme.

Cette technique, qui tend à être adoptée un peu partout, présente en effet l'avantage d'utiliser chaque drogue à un taux très inférieur à la dose létale.

Le plus gros reproche que l'on puisse faire en particulier aux barbituriques, réside dans la marge de sécurité insuffisante qui existe, pour la plupart d'entre eux, entre la dose active et la dose léthale. Cette marge serait d'ailleurs, en général, suffisante s'il n'y avait des variations considérables de la sensibilité individuelle entre les différents sujets.

Bien souvent, en effet, on se trouvera au voisinage de la dose léthale en croyant opérer à des doses simplement actives. Sans doute l'abandon des techniques basées sur le poids du malade (techniques au kilo) a diminué les risques de surdosages, en obligeant l'opérateur à injecter le produit plus lentement et en suivant les réactions du patient. Il n'en reste pas moins une inconnue par suite des différences de "vitesse d'attaque du produit", qui permettent encore des surprises, surprises contre lesquelles d'ailleurs la thérapeutique n'est pas désarmée.

Il est bien évident qu'en se contentant d'une dose correspondant à une narcose de base ou de complément, on augmente la marge de sécurité; c'est ce qu'indiquait H. Weese en 1936 à propos de l'Avertine.

Ainsi que l'établissait Kirschner pour cette même substance qui, tout en n'appartenant pas au groupe des barbituriques, présente avec ces corps un certain nombre d'analogies, l'irrégularité de résorption de l'Avertine par l'intestin et son action inégale sur les différents sujets, empêchent de donner une dose suffisante pour obtenir la narcose complète dans chaque cas.

Il en est de même, *mutatis mutandis*, pour l'Evipan qui paraît beaucoup plus dangereux que la narcose à l'Avertine, et Kirschner ajoutait dans l'article cité plus haut:

"De cette qualité (la sécurité) qui pour un anesthésique doit être considérée comme primordiale, l'Evipan ne peut nullement se réclamer, ainsi que cela ressort de la littérature et que nous-mêmes avons pu le constater dernièrement, pour un cas de mort survenu sur la table d'opérations, au cours d'une anesthésie à l'Evipan seul".

Dans la narcose combinée Avertine intra-rectale, Evipan ou Evipan-Ether, les faibles doses d'Evipan utilisées (3 à 7 cc.) laissent une marge de sécurité suffisante. En même temps, l'excitation post-opératoire serait notablement diminuée.

Philippides, en 1936, confirmait les conclusions précédentes et indiquait qu'à la clinique chirurgicale de l'Université de Heidelberg, l'Evipan pur n'était plus utilisé, sauf pour les narcoses de courte durée. La narcose prolongée par réinjections successives serait à éviter d'après l'auteur qui préférerait compléter la narcose avec un anesthésique par inhalation.

Par ailleurs, et contrairement à une opinion assez fréquemment rencontrée, il déconseillait l'anesthésie à l'Evipan pour les malades ambulatoires par suite de l'excitation et du sommeil post-anesthésique. En France on est loin d'être aussi exclusif et on ne fait nullement les mêmes reproches à ce produit qui rend de grands services.

L'Eunarcon, qui présenterait sensiblement les mêmes caractères que l'Evipan, aurait cependant l'inconvénient de provoquer des thromboses fréquentes.

Bachlechner recommande, dans le même ordre d'idées, l'association Rectidon-Evipan-Anesthésie locale, et Colmers la combinaison Rectidon-Anesthésie locale Eunarcon. Dans ces associations le Rectidon réalise le "sommeil crépusculaire" destiné à ménager le psychisme du patient.

Peut-être moins vigoureusement affirmée en France, cette technique de l'anesthésie combinée paraît cependant vouloir s'y faire jour. Employée avec succès par Fredet depuis de nombreuses années sous forme de Morphine Numal-Protoxyde d'Azote, elle vient de connaître un nouveau succès par l'association Phlébafine-Anesthésie locale.

Beaucoup de chirurgiens ont abandonné les barbituriques pour avoir voulu trop

leur demander; trop hypnogènes, en effet, pour leurs propriétés analgésiques, les barbituriques ne permettent l'analgésie totale, nécessaire aux interventions qu'au prix de doses qui peuvent entraîner des conséquences fâcheuses. Ils ont besoin d'un complément, et à ce prix seulement, peuvent acquérir droit de cité dans la série des anesthésiques chirurgicaux.

En art dentaire, l'anesthésie locale ou régionale se montre largement suffisante pour toutes les interventions de la pratique courante, étant donné son innocuité. Cependant, il faut reconnaître que la combinaison de différentes techniques anesthésiques et l'utilisation de plusieurs produits anesthésiques ou analgésiques s'administrant par des voies différentes, tend à entrer de plus en plus dans la pratique, surtout en chirurgie maxillo-faciale, dans le traitement des grands délabrements faciaux.

De plus, la préparation des malades avant les interventions même les plus simples, marque un progrès certain. Les malades veulent de moins en moins souffrir, et c'est faire preuve d'habileté technique que de leur enlever, au moyen de médications sans danger, jusqu'à l'angoisse préopératoire, elle-même si peu favorable au calme qui doit présider à toute intervention bien conduite.

Nous voyons que le chemin parcouru est fécond en résultats et nous pouvons nous féliciter pour nos malades et pour nous-mêmes que les chercheurs ne s'en soient pas tenu à la prophétie de Velpeau qui, un peu prématurément, dès 1839, mettait fin au progrès de l'anesthésie en écrivant:

"Eviter la douleur dans les opérations est une chimère qu'il n'est pas permis de poursuivre aujourd'hui".

Mais la poursuite des chimères n'est-elle pas souvent à la base de grandes découvertes?

Voilà pour l'avenir, mais passons aux conclusions pratiques:

1° Les recherches actuelles sur l'anesthésie et l'analgésie, tendent à rendre les suites post-opératoires plus simples, moins dangereuses qu'avec les anciens anesthésiques par inhalation.

2° Les anesthésiques locaux gagnent du terrain, grâce aux analgésiques complémentaires, qui rendent l'anesthésie locale plus acceptable pour les malades, et plus pratique pour les opérateurs.

En art dentaire et en chirurgie maxillo-faciale, où l'anesthésie locale est presque exclusivement employée, l'analgésie complémentaire trouvera à bref délai une large place.

3° Les opérateurs réserveront leurs faveurs aux techniques qui pourront être utilisées avec des instruments simples et faciles à manier.

4° Par contre les nouveaux anesthésiques généraux ne peuvent être utilisés qu'avec des techniques et des appareils très précis. Si l'on peut dire qu'une anesthésie générale ne se donne pas à coups de manomètres, mais bien en suivant les règles de la physiologie, on peut affirmer qu'à l'heure actuelle ce serait une dangereuse gageure que d'utiliser certains anesthésiques nouveaux, sans être muni de l'appareillage approprié.

5° Enfin la complexité des appareils et la précision des techniques d'emploi, nécessiteront un apprentissage de plus en plus long et minutieux de la part de tous ceux qui voudront utiliser ces nouveaux anesthésiques. C'est d'ailleurs ce qui explique le mouvement en faveur de la création d'un corps d'anesthésistes qui existe dans de nombreux pays étrangers.

(Adresse de l'auteur: 127, Boulevard Saint-Michel, Paris).

Considérations sur les Fractures Radiculaires des Dents et leur Traitement*

par M. DECHAUME

Les fractures des dents sont peu fréquentes. Il est plus rare encore de trouver la relation de résultats éloignés. C'est pourquoi il nous semble intéressant de rapporter ces 3 observations.

OBSERVATION I (communiquée par M^{me} Rommens).—M. H..., 26 ans, vient consulter le 25 avril 1937 pour faire remplacer la couronne de l'incisive centrale supérieure gauche, qui depuis huit ans — malgré des soins dentaires — a considérablement noirci.

Une radiographie est demandée pour connaître l'état de la racine: elle révèle en dehors de petites lésions apicales sur l'incisive centrale supérieure gauche, une fracture transversale siégeant à la partie moyenne de la racine de l'incisive centrale supérieure droite.

Le fragment radiculaire n'est pas résorbé, mais le canal est presque invisible et le ligament semble avoir disparu. Par contre, il paraît s'être fait un nouveau ligament entre les deux fragments, dont les tranches de section sont à peine émoussées. Cette incisive centrale supérieure droite, solidement implantée, est de coloration normale; elle réagit aux agents physiques.

Le malade questionné se souvient seulement que, à 3 ans, à la suite d'une chute, il aurait perdu une de ses incisives centrales de lait, sans qu'il puisse préciser laquelle.

OBSERVATION II. — M. G..., 40 ans, nous est adressé par le Dr Bonhomme, avec le diagnostic de kyste, pour radiographie et intervention.

Son histoire est la suivante:

En 1915, au cours d'une partie de rugby, il reçut sur la face un violent traumatisme que déterminait une fracture de la couronne de l'incisive centrale supérieure droite. Dans les années suivantes, cette dent fut la cause d'une série d'abcès à répétition, traités par des pointes de feu.

En 1923, on meula la couronne de cette dent pour placer un appareil mobile.

En 1926, on fit l'extraction de la racine de cette incisive.

En 1932, commença à se développer dans la région incisive supérieure droite une tuméfaction, qui, depuis, s'est accrue progressivement.

En décembre 1936, l'augmentation de volume soudaine décide le malade à consulter. C'est à ce moment que nous le voyons pour la première fois.

La face n'est pas déformée. Mais une fois la lèvre supérieure soulevée, on découvre facilement dans le vestibule, en regard de l'alvéole de l'incisive centrale supérieure droite—recouverte par une muqueuse légèrement congestionnée—, une tuméfaction peu importante manifestement kystique.

L'incisive latérale supérieure droite est mobile, non douloureuse, elle réagit mal aux agents thermiques. On peut la croire ébranlée par le développement du kyste.

La radiographie révèle:

1° Un kyste du volume d'une cerise, développé dans l'alvéole de l'incisive centrale, au contact de l'incisive latérale.

2° Une fracture transversale à la partie moyenne de la racine de l'incisive latérale.

(*) Communication faite au Congrès de l'A. F. A. S. d'Arcachon, 22-27 septembre 1938.

Les biseaux des fragments sont nets. Il n'y a aucune apparence de cal.

Le 9 janvier 1937, sous anesthésie locale, la dent est extraite et le kyste énucléé.

Les fragments dentaires sont unis plus par la membrane kystique que par un cal fibreux. Les surfaces de section semblent celles d'une fracture récente.

Suites opératoires sans incident.

OBSERVATION III. — M. T..., 33 ans, nous est adressé pour un abcès de la région incisive supérieure gauche. A l'âge de 12 ans, nous dit-il, il aurait reçu un choc assez violent dans la région de l'incisive centrale supérieure gauche: la dent est toujours restée un peu mobile et sensible.

A 26 ans, l'incisive latérale supérieure gauche a été extraite.

Depuis quatre semaines environ s'est développé un abcès vestibulaire en regard de l'incisive centrale supérieure gauche. Son dentiste consulté a enlevé le bridge posé sur la canine pour remplacer la latérale, trépané l'incisive centrale, fait des pointes de feu. En l'absence de guérison, il a demandé une radiographie.

Lorsque nous le voyons, il conserve une tuméfaction vestibulaire, dont il est impossible de dire s'il s'agit d'un abcès ou d'un kyste suppuré. L'incisive centrale supérieure gauche n'est pas mobile et paraît assez solidement implantée.

La radiographie montre une image curieuse:

—Une fracture de la racine de l'incisive centrale à la partie moyenne;

—Les deux fragments, dont les biseaux paraissent nets, sont séparés par une zone de raréfaction probablement kystique, du volume d'une noisette;

—Le fragment apical de la racine semble refoulé plus haut que l'apex de la dent homologuée.

Le 17 juin 1937, intervention sous anesthésie locale.

Incision vestibulaire arciforme. En essayant de décoller la fibro-muqueuse avec la rugine, on se rend compte qu'elle est adhérente avec le tissu pathologique, dont on la clive au bistouri sur une surface de 1 centimètre carré environ. Tout autour, l'os est sain.

Avec le ciseau gouge on sectionne l'os à quelques millimètres de la perte de substance pour essayer d'avoir la "pièce" dans son ensemble. Cela est malheureusement impossible.

Avec le décortiqueur mousse de Chompret, on enlève d'abord facilement un amas de tissu fongueux et fibreux. On aperçoit alors, dans la profondeur, le débris radiculaire qui est facilement énucléé au syndesmotome.

Avec la curette, sans appuyer sur l'os qui est sain, on finit d'enlever les débris tissulaires.

On se rend compte alors que les parois de la cavité osseuse sont nettes. La logette de la racine ressemble à une alvéole normale.

Le débris radiculaire n'apparaît pas résorbé.

La tranche radiculaire qui reste en place est lisse comme si la fracture était récente. Il n'y a aucune apparence d'hypercémentose.

Obturation immédiate du canal.

La dent est suffisamment solide après intervention.

Le pronostic et la thérapeutique des fractures dentaires suscitent encore maintes discussions, car le doute subsiste sur l'existence et le mécanisme du processus de réparation.

Quelques observations sont à ce point de vue fort instructives.

Tout d'abord, celle de Rousseau-Decelle: "Calcification pulpaire consécutive à une fracture dentaire complète" (*Revue de Stomatologie* décembre 1921, p. 672).

La dent fracturée, deux ans auparavant, fut extraite pour la réfection d'un appareil de prothèse.

La pulpe et le filet radiculaire étaient complètement calcifiés; ils formaient un véritable tenon qui maintenait ensemble couronne et racine. Mais l'auteur ne parle pas de l'état des fragments radiculaires.

A ce propos, Rousseau-Decelle avait recherché et trouvé dans la littérature, deux observations analogues de Tomes, qui lui permettaient de conclure:

"Ces observations prouvent que dans certaines conditions exceptionnelles et qui nous échappent:

"1° La pulpe peut survivre à un traumatisme considérable;

"2° Même étant exposée, elle est susceptible de résister à l'infection;

"3° Dans ces conditions, sa vitalité non seulement n'est pas altérée, mais encore elle s'exagère pour participer à un processus de défense;

"4° Ce processus de défense, cet "effort réparateur" (Tomes), peut être assez intense pour dépasser le but à atteindre et amener une calcification complète de la pulpe avec ou sans hypertrophie."

Le cas de Béliard et A. Ferrier (1) nous montre l'influence heureuse de la persistance de la vitalité.

Vingt ans après un traumatisme, ayant porté sur les incisives centrales supérieures qui avaient été luxées, bien que ces dents n'aient donné lieu depuis à aucun accident, une radiographie est faite qui montre:

—Sur l'incisive centrale supérieure droite qui a conservé sa vitalité pulpaire, un trait de fracture radiculaire transversal à peine perceptible:

—Sur l'incisive centrale supérieure gauche, un trait de fracture radiculaire transversal, net. La chambre pulpaire n'est pas visible. La trépanation du canal est impossible. Il n'y a pas de lésions apicales. Les auteurs pensent que la pulpe ne fut pas détruite au moment de l'accident.

Les observations publiées en 1935 et 1936 par Mahé (2), ne sont pas moins riches d'enseignements. Elles l'amènent à conclure que "guériraient les fractures muettes, celles que la radiographie permet seule de reconnaître. Et cette consolidation serait toujours spontanée. Les plus grandes réserves devraient toujours être faites dans les cas où une mobilité sensible obligerait à demander la guérison au traitement. Peut-être, étant désormais bien avertis, pourrait-on tenter une immobilisation extrêmement prolongée avec contrôle radiographique périodique permettant de suivre la production de ce processus réparateur. Mais, il faut bien savoir que le résultat d'une telle tentative demeure fort aléatoire".

Mahé attribue à la pulpe une fonction éburnogène.

Nous ne retiendrons pas dans cette étude les cas de malformation radiculaire que nous avons publiés (3). Ce sont, cependant et vraisemblablement, des exemples de consolidation de fractures par suite de la persistance de la circulation dentaire chez des sujets jeunes.

Il nous semble logique de reprendre cette question des fractures dentaires à la lumière des données de la pathologie osseuse et plus particulièrement des notions nouvelles exposées par le Prof. Leriche sur la réparation des fractures.

D'après cet auteur, la consolidation dans un foyer de fracture se fait lorsque sont mis en œuvre les processus suivants:

1° Formation d'un hématome inter- et périfragmentaire;

2° Transformation de l'hématome en tissu conjonctif embryonnaire;

3° Raréfaction des extrémités osseuses (il faut pour cela qu'il y ait vasodilatation);

4° Surcharge calcique locale;

5° L'ossification commence autour des fragments, puis entre les fragments.

Cela se passe normalement ainsi, car tout traumatisme provoque un trouble vasomoteur: vaso-constriction passagère, suivie de vaso-dilatation autour et dans les fragments.

C'est que, dans un os, la circulation n'est pas assurée uniquement par une artère centrale. De nombreuses artères donnent une irrigation supplémentaire par voie périostée. L'existence de cette double circulation permet toujours l'hyperémie des fragments et la mobilisation du calcium nécessaire à la réparation.

Il n'en va pas de même dans les dents: il existe un seul pédicule vasculaire qui chemine axialement. Ce pédicule est fragile à son entrée à l'apex: il suffit pour s'en convaincre de penser à la fréquence des mortifications pulpaire post-traumatiques, sans fracture radiculaire. Ainsi, le plus souvent, les 2 fragments sont privés de la circulation axiale. Comme, d'autre part, la circulation périphérique par voie ligamentaire n'existe pas, la dent se trouve privée de circulation. Enfin la circulation à l'intérieur de la dentine ne peut être comparée à celle du tissu osseux: elle est nulle pour ainsi dire. Ceci nous explique pourquoi la résorption des fragments et leur consolidation demeurent si exceptionnels: dans ces observations (Mahé, Rousseau-Decelle), la circulation avait subsisté dans la pulpe.

Ceci nous montre encore qu'il serait vain de chercher la consolidation des fragments radiculaires après dévitalisation, malgré la mise en place d'un pivot, même fileté, pour chercher à rapprocher les fragments.

Notre conduite à tenir en présence d'une fracture dentaire doit donc s'inspirer de ces notions. Elle sera la suivante: en règle générale, l'immobilisation est insuffisante, car le pédicule vasculaire est sectionné à l'apex.

—Si la fracture siège au tiers moyen ou au tiers apical, il faut, après traitement du canal, enlever chirurgicalement l'apex, car il est exceptionnellement bien toléré.

—Si la fracture siège dans le tiers coronaire, la dent n'a plus une implantation suffisante, il faut sacrifier le fragment coronaire, et parfois le fragment radiculaire s'il est impossible de placer une dent à pivot. Vouloir fixer le fragment coronaire au fragment radiculaire par un pivot est une entreprise hasardeuse, qui peut donner un succès apparent, mais n'aboutira certes pas à la formation d'un cal.

(1) BELIARD et A. FERRIER: Deux cas de tolérance alvéolaire prolongée pour des racines d'incisives fracturées par un traumatisme ancien. *Revue de Stomatologie*, août 1928, p. 456.

(2) MAHE: Anomalie radiculaire d'interprétation difficile. *Revue de Stomatologie*, novembre 1935, p. 705.

MAHE: Fractures intraalvéolaires de racines. *Revue de Stomatologie*, avril 1936, p. 280.

(3) DECHAUME: Dystrophies et malpositions dentaires d'origine traumatique. *Revue de Stomatologie*, février 1935, p. 109.

In Memoriam

A Montréal, le 21 décembre 1941, à l'âge de 52 ans, est décédé le docteur Edouard Latour, chirurgien dentiste. Nos plus vives sympathies à la famille.



Photo courtesy Canadian Pacific Railway.

SKIING ON MOUNT NORQUAY, BANFF, ALBERTA.

Everyone on this earth should believe, amid whatever madness or moral failure, that his life and temperament have some object on the earth. Everyone on the earth should believe that he has something to give to the world which cannot otherwise be given.—G. K. Chesterton.



J. F. MORRISON, D.D.S.,
Winnipeg, Manitoba

Secretary-treasurer and Registrar, Manitoba Dental Association.
(Secretary since 1923)

Graduated in dentistry from Northwestern University in 1905.

Major, C.A.D.C., O.C. No. 10 Detachment 1921-1938.

Overseas with C.A.D.C. 1915-1919.

Member of United Church, A.F. & A.M., Scottish Rite and
Mystic Shrine.

Member Public Schools Health Committee for City of Winnipeg.

Associate Editor for Manitoba of Journal of Canadian Dental
Association.

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Aesthetics in Full Denture Construction

by W. D. CLARK, D.D.S., Hamilton, Ontario

DR. CHARLES CHANNING ALLEN has said, "No profession has more use for the aesthetic and beautiful than the profession of dentistry; for an aesthetic restoration is a very important part of our obligation to our patient."

A test has been made using twenty-five people with their own natural teeth in position. They were all asked, "If you were to lose your own natural teeth and have to resort to dentures, which of the three, following points would you consider of greatest importance to you—good fit, ability to chew your food well and with comfort, or appearance?" Of the twenty-five, twenty-three placed appearance first. The test would seem to indicate that our patients, on the whole, have a good deal more interest in aesthetics than some of us would be willing to concede.

Many men in dentistry consider their greatest responsibilities in denture work lie first, in impression work and second, in the taking of a correct centric relationship. Any full denture clinician will verify this. A lot of time and energy is expended in taking careful preliminary impressions, making individual impression trays, and then procuring fine finished impressions. Great care is taken in registering centric and protrusive relationships. These are transferred with all precautions to an articulator and a mech-

anically exact set-up is obtained. However, it would seem sometimes that, when the patient presents himself for the try-in, the operator's patience is almost exhausted and if his aesthetic sense is not too seriously shocked, he proceeds to finish the dentures. The following suggestions are humbly presented in the hope that they may assist somewhat in obtaining a little more pleasing and convincing appearance for some of our denture patients.

PRE-EXTRACTION RECORDS

Where one is able to see the patient previous to the extraction of the teeth, a record of the facial outline can be obtained that will be of later use. Undoubtedly the simplest of the methods for making a record of facial contour is the profile x-ray on a 5 x 7 film. This is cut out and adjusted to the patient's profile

- (1) when taking centric relationship
- (2) when trying in the wax set-up
- (3) when checking finished dentures
- (4) six months or a year or more later if the dentures have settled and we are rebasing in an effort to restore original appearance.

A photograph taken before the loss of the teeth can often be supplied by the patient. This can be supplemented by the presence of a son or daughter of the patient with somewhat similar dentition

in the office when the set-up is being approved. Where pre-extraction photographs are being taken at the request of the operator, there should be three positions obtained—first, in profile, second, full face with teeth in centric occlusion and the patient smiling broadly enough to show upper and lower teeth, and third, full face with lips closed.

Another pre-extraction aid is a compound impression of the labial surfaces of the upper and lower anterior teeth in centric relation. This should be chilled thoroughly in the mouth, poured in stone and used later for comparison with wax set-up.

The shade is taken before extraction and the exodontist should be requested to save the anterior teeth to further assist the prosthetist in selection of the mould.

Pre-extraction records should not be slavishly followed, since, in a great many cases, the patient has been without some posterior teeth for years with consequent change in facial dimensions. It is often possible for the operator to improve the aesthetics by restoring, to some extent at least, what he visualizes as the patient's original appearance, or an improvement.

SELECTION OF MOULD

The selection of the mould will be influenced by pre-extraction records, facial outline, and arch form. In a great many cases, the operator may be of several minds in his selection of the most attractive mould, and in this connection it is suggested that two baseplates be made to fit the upper cast and six anterior teeth from two different moulds of teeth be set up before the patient's arrival for the visit following impression work. Of course, neither of these set-ups will be in suitable position since they are merely set in wax to facilitate rearranging at the chair.

When the patient arrives, the central incisors are set more accurately on both

baseplates. The baseplate which, at this moment, seems to present the most acceptable teeth should have the remainder of the upper anteriors waxed in place. While the operator is adjusting these at the chair, the assistant may be placing laterals and cuspids in position on the other baseplate. It is not intended that these teeth be in their final position at this time. They are merely placed in a reasonably acceptable position on their baseplates in order to make the best possible selection of moulds. It is often true, especially where we have no pre-extraction records, that neither of these moulds will entirely satisfy the operator, but one of them will usually point the way.

Dr. R. W. Tench has written, "When selecting teeth for edentulous cases, pay no attention to the form of the lost natural teeth, but select an artificial form which harmonizes with the facial outline. This will insure the selection of long teeth for long faces, short teeth for short faces, narrow teeth for narrow faces, and wide teeth for wide faces, together with the proper straightness or convexity of outline form. If the natural teeth were harmonious with the face, this method will reproduce them; if they were inharmonious, artificial teeth selected in this way will improve upon them."

SHADE SELECTION

Obtaining shades from the patient's natural teeth previous to extraction is undoubtedly best. We require three shades, that of central, lateral and cuspid. Occasionally in older people there is considerable variation between the incisal and gingival halves of the teeth to be matched. It will help in these cases to draw a pencil mark horizontally across the face of the tooth midway between incisal edge and gingival thus allowing the eye to concentrate on one part.

In the absence of pre-extraction records we must select shade by trial and error.

WILFRID D. CLARK



Lipstick, where present, should be removed and teeth from the shade guide are tried in the mouth, against the skin of the face and compared for suitability with the colour in the iris.

✓ Shades of teeth should not be taken under artificial light or in sunlight, since under both these conditions the red-yellow rays predominate. North sky light and west light at noon are both reflected light, thus, the excessive reds and yellows are absorbed by the atmosphere and consequently the light we receive from these sources is well balanced.

ESTABLISHING VERTICAL DIMENSION

The tissues of the cheek do not rest on the teeth. They are supported by the bony structure of the face. The zygomatic ridge and the malar bone above and the lower margin of the mandible

below. A closed bite folds these tissues and distorts them, adding years to the appearance. Opening the bite sufficiently assists very materially in restoring the patient's original appearance.

If the patient was not seen prior to extraction, the following may be an aid in determining the bite opening. With an indelible pencil, mark a point just below the nose and on the median line of the upper lip. Make a similar mark on the point of the chin at the median line. The patient should then open and close the mouth four or five times, stopping the closure when the jaws reach a comfortable position. With the patient remaining steady in this position, measure the distance between the two pencil marks. Repeat this procedure several times and when the patient has consistently returned to the same position, this

may be accepted as fairly close to his normal position, and the bite blocks built up so that centric may be taken with this vertical dimension.

When in doubt, be careful not to over-open the bite. There is less grief if the dentures are in a slightly closed position rather than having the bite opened too widely, especially if the patient be sixty years of age or in poor health.

POSITIONING OF TEETH

Setting Central Incisors.

When the operator is convinced that he has selected the teeth that are most suitable in mould and shade, the median line should be determined very exactly. A denture in which the median line has been misjudged usually presents an amateurish appearance. When accurately placed, it becomes the first guide to incisor positioning. Much of the time formerly given to the marking of high and low lip lines, cuspid lines and others is now used in rearranging the upper anterior teeth—it gives quicker and safer results.

The upper central incisors provide the key to the position of the remaining ten anterior teeth. Their position must conform to the median line of the face, high and low lip positions, and profile requirements. When these demands have been satisfied, the rest of the anterior teeth must assume a definite relationship. This explains the great care taken that the central incisors be placed in the position most advantageous to the goal of good aesthetics. The twelve anterior teeth support the lips; proper bite opening and careful positioning give the lips a full pleasant, youthful, contour without evidence of strain when the jaws are in the rest position.

Having decided the position of the centrals in relation to the ridge and lip, their position in regard to each other should be considered. Usually they will

not be placed so that their incisal edges together form a straight line, or their labial faces a single plane. In talking with Dr. Bert Hooper, he gave as his opinion that the upper central incisors should *always* be placed, in relation to one another, in one of two positions—

- (a) their mesial edges should be depressed and their distal margins prominent.
- (b) the opposite.

Which of these two is the most suitable for the patient will be determined to some extent by the arch form. The square type will usually look better with the mesials depressed and the tapering type with the distal margins depressed. It is often well to consider the advisability of lapping the centrals or on the other hand, spacing them. Usually the operator will attempt several positions before he finally arrives at the arrangement which is most pleasing.

Setting Lateral Incisors.

In a great many cases the laterals should not be of the same mould as the centrals. In women they may be considerably narrower. They may often be of a lighter shade since they have less body, hence less opaqueness. Their positions should usually conform somewhat to the determined positions of the central incisors. Where the centrals have been depressed at the mesial margins it is often best to similarly depress the laterals. A small round stone is used to remove the distolingual margin of the central incisor and to make a concave trough in this position. About a millimetre of the mesial margin of the lateral incisor is inserted in this depression. The laterals should be turned so that the distal margins are prominent.

Where the centrals are depressed at the distal, the laterals may lap them slightly (grind the mesiolingual margin of the lateral) or one may lap and the

other may be rotated so that its mesial margin is prominent.

The neck of the lateral is always less prominent than the neck of the central and the incisal length is usually less. Several of the foregoing suggested lateral positions and a dozen others that we see daily as they have been positioned by nature may be used by the operator before obtaining the highest aesthetic effect.

Setting Upper Cuspid.

The upper cuspid should occupy a bold position in the arch. They should be darker in shade than the lateral and first bicuspid in every case. Their necks must be prominent and contrast sharply with the depressed necks of the laterals. They should not be inclined distally at the neck to allow them to occlude more easily with the lower cuspids. The distobuccal angle should not be prominent. The younger patient should not have his cuspid ground along the incisal edge and the older patient should almost never have his flattened too seriously.

The loss of the two cuspids produces a greater change in expression of lips, mouth and nose than the loss of the four incisors. Therefore, in restoring them they should be placed prominently and the cuspid eminences must always be restored in the denture material.

Setting Lower Central Incisors.

The position of the lower centrals is determined by the median line, the vertical dimension, the position of the ridge (they should usually be set over the ridge) and the position of the upper central incisors. They can often be turned in the same way that the upper centrals were turned, (never the opposite). Usually they are a little more prominent than the lower laterals. Twisting of the lower anterior teeth can be done more radically than in the uppers since their smaller size makes these changes less apparent. Where we have

sufficient ridge room, spacing is particularly effective on the lower anteriors, especially when accompanied by some staining of incisal edges.

Setting Lower Lateral Incisors.

The lower laterals are often lapped by the distals of the centrals but in almost every case some turning of the lateral is most acceptable. Where the distal margin is prominent, a small round stone may be used to reduce the distolingual margin of the lateral and the mesial margin of the lower cuspid inserted in the depression. Conversely, in the tapering type of face it commonly gives a good appearance to grind the mesiolingual margin of the cuspid and lap the depressed distal margin of the lateral. Another set-up that is attractive requires that laterals be depressed so that they are lapped by both central and cuspid.

Setting Lower Cuspids.

Following the example of the upper cuspid, the lower should be reasonably prominent especially at the neck. It is usually tilted a little mesially. This looks well and will assist in procuring balance in the dentures.

Setting The Upper Posteriors.

The bicuspids and molars must not follow the arc formed by the anteriors but are carried back in an almost straight line from the distal border of the cuspid to the second molar. Following this idea in a general way their exact positioning is further determined by the requirements of occlusion, balance and arch form.

Setting Lower Posteriors.

The lower posteriors will follow the ridge and the upper posteriors and are set up entirely to occlusion requirements.

In viewing the finished set-up a better perspective is had if the patient is asked to step from the chair to the floor. Thus at eye level the set-up may be most critically examined full face and in profile, at rest and in a broad smile.



Figure 1

Extractions were followed by large bone loss and collapse of lower facial muscles. Note thin lips and depressed corners of mouth.



Figure 2

Generous bite opening and extensive plumping gives better lip lines and turns up corners of mouth.

BETTER GINGIVAL APPEARANCE

In setting up artificial teeth, grinding is usually done at the neck. It should be kept in mind that the natural teeth are ground at the incisal and occlusal edges. Following this idea in denture work will allow leaving the neck of the tooth largely untouched and, if it is also exposed, the finished result gives a far more convincing appearance than a similar extent of denture material. Dr. Norman Essig says, "The artistic value of any full denture restoration can be greatly enhanced by the imitation of different degrees of recession that takes place in the human mouth, by judiciously uncovering the necks of the porcelain teeth in the same manner and in the same way that the gum tissue shrinks from around the cervical margins of the natural teeth as time goes on." In patients fifty years of age and over the denture material between the teeth should be removed

in the wax set-up as far distally as the second bicuspid.

FILLING AND STAINING

Except in the youngest of denture patients, some thought should always be given to the placing of fillings or the staining of teeth, or a combination of the two.

Staining is usually done at the gingivals and to reproduce labial defects in the upper denture; in the lower denture, at the necks and on the incisal edges of the centrals and laterals. Where staining is to be done on the incisal edges of the lower anteriors, these teeth should first be ground to simulate incisal wear commonly seen at 50-60 years of age. Leaving the outer ring of enamel untouched, the contained ellipse of dentine is stained yellow brown. This is quite convincing especially where the lower anteriors have been spaced. In the set-up these stained

teeth should be set up $1\frac{1}{2}$ mm. free of the bite to avoid the necessity of mutilation in the final articulator grind-in.

Gold foil fillings or gold inlays may be placed in anterior teeth and occasionally as far distally as the mesial of the second bicuspid. An excellent result can be obtained by placing a gold foil in the mesial of an upper lateral incisor and then staining the margin to show defects. Bridgework may be copied by placing $\frac{3}{4}$ crowns on several teeth and using teeth of a little lighter shade and with gold incisal tips for the intervening teeth.

PLUMPERS

The use of wax plumpers assists materially in giving proper shape to lips and cheeks. The amount of filling out to be done and the proper placing of the material must, of course, be decided upon at the time of the final wax try-in. Kerr's plastic wax may be luted to the baseplate wax wherever desired and because of its

workable character, it may be pushed around until the desired effect is obtained. The canine eminence will always be restored and the corners of the mouth may be lifted neatly to give a very natural expression by plumping in the region of the second bicuspid and first molar.

In short lip cases and in all circumstances where the patient shows too much tooth, shorten the length of the denture over the anterior teeth to allow muscles to relax and cover more of the tooth surface. This applies to the lower lip also.

AVOIDING AESTHETIC LOSS

Where the patient has six or eight acceptable lower anterior teeth remaining and presents herself for a full upper denture, the dentist may be well advised from the standpoints of aesthetics and function to reject the work until some definite arrangement has been reached with the patient concerning the restoration of the missing lower posterior teeth. Because



Figure 3

The patient has her "old" dentures in her mouth. Note thin lips, closed bite and multiplicity of lines around mouth.



Figure 4

Bite was opened about six mm. to give more youthful appearance. This patient's morale was noticeably improved.



Figure 5

Shows some closure of bite and forward thrust of mandible. Note thickened lower lip.

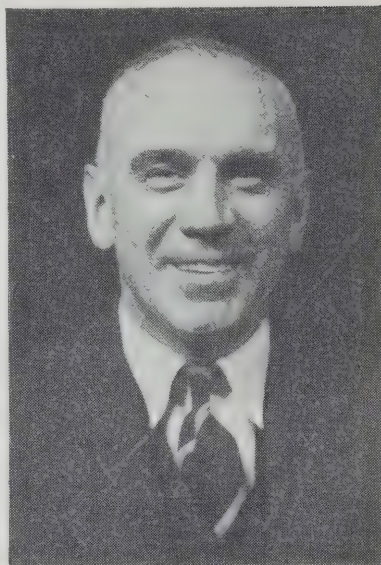


Figure 6

In new dentures bite was opened and upper anterior teeth were set up fairly well.

of the requirements of occlusion, the full upper and the bar lower must be on the articulator at the same time and they likewise must be placed in the mouth at the same visit. In this way the upper denture never has to stand those stresses incidental to incisal occlusion which invariably will drive the upper denture up under the upper lip and consequently ruin aesthetics and the upper ridge.

MAINTENANCE OF AESTHETICS REQUIRES BALANCED OCCLUSION

In this essay it has been assumed that the dentures are being constructed according to an accepted technique. It is of little value to the patient to have artificial teeth whose appearance may delight her if they are not comfortable in rest and function. If the occlusion lacks balance in any position the original aesthetics together with good function will eventually be forfeited. In this connection it might be interesting to note the suggestion of Dr. F. M. Hight. He

attaches one end of an orangewood stick several inches long to the labial surface of an upper central incisor by means of sticky wax. If the occlusion is such that when the patient goes through the movements of chewing, little or no movement of the stick extending beyond the lips takes place, the occlusion can be considered as balanced, but it should not be considered so if the orangewood stick moves around.

Thus denture aesthetics is to some extent a transient thing relying for permanency on the stability of the dentures which in turn is dependent on the maintenance of ridge form and correct mechanical relationship between the two dentures.

Securing of the best in aesthetics requires time. The operator who is not already doing so will be well repaid in his patient's satisfaction and in increased fees for spending as much chair time or more on appearance as he now does on both impressions and the taking of jaw relationships.

Relief Areas in Lower Dentures

- by H. J. MERKELEY, M.D.S., Winnipeg, Manitoba

WITH the adoption of special individual lower trays for the taking of our lower impressions, some new problems have arisen.

The chief ones are the over compression of the crest of the alveolar ridge and undue pressure on the mylo-hyoid ridge. When a loose-fitting stock tray was used as formerly, there was usually ample escape space for impression material, even though a high heat compound was our impression medium, and so only the very sharp ridges were a problem.

The swing now seems to be towards more plastic impression materials, that can be muscle-moulded as well as muscle-trimmed.

However, we are still faced with the necessity of providing relief to the mylo-hyoid ridge as well as other areas, especially the sharp crest presented by some ridges. When compound stop blocks are used, as suggested in former articles of some years ago, there is a tendency to over compression in these areas so the location of these stops has been changed to more suitable areas. Where formerly we placed one in each first molar, and the third in the central incisor region, we now place one in each cuspid region and the other two, one in each second molar area. It was found that since the first molar area was called upon to bear the greatest stress during mastication it was unwise to take a chance on over compression by placing the compound blocks in this area. Likewise the central incisor region often presents a sharp ridge and so it also is easily overloaded.

Many suggestions have been made for the relief of the areas noted, some re-

lieve by scraping the impression, or again others soften the impression material in the area involved and reinsert the impression. In the former case we are simply guessing, while in the latter there is no relief since there is no escape for the impression material.

A simple way, and one that has proven successful in the hands of many to whom it has been suggested, is to perforate the tray and the primary impression just before the lining impression material is placed in it.

The diameter of the perforations will vary with the necessity of each case, ranging from holes bored with a number six to ten burr, to a series of narrow slots. The mylo-hyoid area is frequently dealt with by using two holes bored with a number six bur. Where the ridge is quite sharp, the primary impression is hollowed out to a depth of at least two mm. Areas over sharp mylo-hyoid ridges should be treated likewise.

Rebases can be made much more stable and comfortable if the same plan is adopted for the reline impression. In this case bore the holes from the lingual, interproximally, to reach the crest of the ridge area, and hollow out well over the crest of the ridge before placing the reline impression material.

In using this technique, we must make holes the diameters of which are suitable to provide escape paths for the impression material. Naturally the plasticity of the impression material, and the sharpness of the ridge will be the determining factors.

This method is logical, effective and simple, and can readily be used with any tray, and any technique.

A Dental Service to More of Our People

by S. L. HONEY, Timmins, Ontario

"PEACE is the fruit of justice," said the dignitary of one of our faiths in a message to his people recently. Large numbers of our population subscribe to this thought and as a result would be inclined to believe that war is the harvest of injustice. Continuing this reasoning one might conclude that quarrelling factions within the border of the country or in one's neighbourhood are the result of injustices. It would also seem reasonable to assume that in view of the millions of people who are now ranged against other millions in a death struggle, which has spread to all parts of the world, that these injustices must have been rather extensive. If history can be relied upon, members of the human family have been unjust to one another as long as they have had sufficient brain power to evolve schemes which would answer the purpose. It has also been predicted by someone who knew the tendencies of the family rather well that there would be wars and rumours of wars until the end of time. Surely we are not included among those who participate in the profits from or contribute to these injustices.

Let us examine together some of our accomplishments for the past ten year period, and probably we can place ourselves in a better light. Just here we would like to insert a proviso. If all has not been running smoothly in the social order we are permitted to disassociate ourselves from those things that have been criticized and found wanting. To begin with there is the little matter of the depression so called, with its unemployed, numbering at one time 713,000 (February 1933) and dependents. The same month we find 349,382 heads of families on direct relief with dependents numbering 1,445,919.

It was during this same year that the

head of a firm operating in Canada admitted having drawn from the company hundreds of thousands of dollars for his services. His wife also drew a few tens of thousands for being on the executive. Between the two of them they managed to live that year without depleting reserves.

The Dominion Bureau of Statistics informs us that we have 3,289,140 of our population living on farms. These are the people that grow our food and supply us with the men and women that become important in our country. How have we used them of late? Is it not distressing to see how their standard of living has gone down and down? Is it not interesting to note how they have retained their independence throughout the depression by asking for relief in the ratio of 19 agriculturalists to 4957 of the urban population in Manitoba 1940, 2 agriculturalists to 193 of the urban population in Prince Edward Island, according to the Département of Labour? The dairy farmer of Ontario sold his milk. The fruit farmers sold their fruit, the people of the Maritimes their fish and the western farmer his grain at rates considerably below those required to maintain a reasonable standard of living. Again we, the average citizens, would ask it to be remembered that we should in no way be held responsible. We can't adjust supply and demand and after a sweeping statement such as that, surely, as consumers, we can conscientiously implore those who have provided our food not to plan anything against us if the tide of fortune should turn. Injustices, yes, but really we shouldn't be blamed for practising economy or buying all we can for the least exchange medium. Hasn't that been an accepted custom for generations? Like a guilty prisoner at

the bar we are not lacking in excuses but will the judge believe us?

DENTISTRY'S RELATION TO SOCIAL INJUSTICE

But what, you may ask, is the connection between these social injustices just recorded and a dental service to more of our people? In reply it would appear to the writer that the remedy, if any, for these ills, lies within the power of those most concerned and not in waiting for the Government to make a move. In support of this opinion we have but to witness the inability of our Government to alleviate the outstanding social ills of the past decade — perhaps through no fault of its own because the Government is "of the people and for the people" and is unable to speedily put in motion machinery that will be received by all sections of the democracy with satisfaction.

It has been estimated that over 7,000,000 Canadian people will receive no dental attention this year, nor have they in any given year during the past ten. In this same period we have had "time loss" in the offices of our qualified dentists running anywhere from one to several hours a day. Although this latter condition has been drastically altered since the war commenced and although numerous centres are now without dental service and large numbers of dentists in other localities are finding difficulty in caring for the work that is presenting itself due to more assured employment, nevertheless we have here social machinery which obviously needs adjustment. The writer became curious about how a cross section of our people would respond if asked for a remedy for the above condition and prepared a questionnaire which was sent out in November. Care was observed in mailing these to see that some would be received by men who had property but no dependent children so that they would have everything to lose and nothing to



S. L. HONEY

win, personally, if they advised that dental health was a responsibility of the Government. Curiously enough the replies were unanimously in favour of organized care with respect to the dental health of our people. It would probably be of interest to quote three or four of them here. First, from a man 65 years of age holding a responsible position in industry and in comfortable circumstances. He said in reply to the questionnaire regarding *Dental Care for the General Public*:

"It seems to me that the lack of interest in, and knowledge of the importance of the care of the teeth, are two of the main reasons for people neglecting having their teeth attended to.

"Education is certainly what is needed to remedy the existing apathy that undoubtedly exists.

"Parents might be brought to a better understanding of the serious conditions that may come about in their children's health, by pamphlets mailed to them, setting out the possible consequences of neglect of the teeth of their children.

"Dentists might give a series of lectures in high and public schools, possibly illustrated by coloured charts, x-rays etc.

"Newspapers might publish a series of articles by well-known dentists, in much the same way as they publish articles by medical men.

"A system might be devised whereby families, by paying a quarterly fee, or possibly an annual fee, would be entitled to dental treatment, if, and as, required.

"Municipal authorities or service clubs, should be contacted with a view to showing them the ill effects of neglected dentition in children, and with a view to obtaining financial assistance in certain cases of people being entirely unable to afford to have their children looked after.

"To my mind, continual education in matters pertaining to dental care and prevention, would be the solution of the problem."

2nd. A Saskatchewan lawyer, aged 45, who apparently allowed his mind to dwell upon the hours of unemployment in dental offices answered as follows:

"Figure out the approximate number of surplus dentists. Secondly, execute the surplus."

3rd. A member of the House of Commons with no dependents said:

"I beg to state that the question of State Medicine, which of course included the dental branch, was often discussed in the House of Commons, in several sessions during the last fourteen years, and although that question was brought in by private members, on private members resolutions, those discussions were always most interesting, and naturally most of the speakers were doctors. Noth-

ing concrete came out of those debates, I mean as far as the Federal Parliament accepting such a move. I have no doubt that public opinion is getting more and more ready, for eventually accepting such legislation.

"No doubt you will not be surprised to learn that some of the strongest opponents of State Medicine, are prominent practitioners, who want the personal initiative maintained in the medical profession, and who don't want doctors to become purely civil employees. And that school of thought is a very strong one among the doctors. As far as I am personally concerned, I am absolutely open-minded on that question, and in fact I hope that the day is not far distant that we will have at least health insurance for every Canadian, which I am certain will be conducive to fuller life for the individual and will make for a healthier nation."

4th. A public school principal with no dependents, replied as follows:

"All children, pre-school and school age, should have regular dental examinations. Parents who are unable to bear the cost of the dental work should have the opportunity of sending their children to state-controlled clinics.

"These clinics should be supervised by the state, and staffed by local dentists on a part time basis and remunerated by the state. In this way dentists would be able to conduct a private practice.

"Free dental examinations should be available to all.

"Adults, lacking funds, also should have the opportunity to receive free dental treatment at the state controlled clinics."

5th. An industrial manager, the father of four children gave this reply:

"Dental care and medical care are closely related and while I do not know of a program, which includes both, the desirability of such a union has considerable merit. The providing of dental as well as medical care for our armed forces

is of long standing and if such care is deemed essential to these men it should be equally essential for the entire population.

"Mr. Thorson has revealed that on a basis of medical examinations of 50,000 young applicants for the army only 61.69% were of the required fitness to serve their country in any theatre of war.

"It is probable that with proper medical and dental care through the years this percentage would have been appreciably higher.

"I believe that it is only a matter of time before some suitable medical and hospitalization plan is made available to the vast majority of our people. If dental care could be incorporated into this plan or made available as a separate benefit, I believe the basis of a good health program would be on a sound basis.

"I am interested in this subject and will be pleased to know the results of your survey."

SUMMARY

The above answers were typical of the trend in replies which would indicate that the neighbourhood conversations regarding national health are perhaps an indication of how our people are thinking. Do you suppose that the three thousand and some dentists in private practice in Canada are thinking constructively and ahead of the public, with respect to health insurance or public health services? Have the people faith in the ability of the dentists to adjust themselves to meet this change in political thought? Have we faith that we are able to oust apathy and unsound economy and build a cohesion within our organization that will be capable of "planning" acceptably for the new order or shall we be the "planned against".

We speak of the new order almost without an "IF". What happened to the old order? Did democracy so change itself that it was no longer suit-

able? Does it not seem likely that democracy as it was known to the pioneers of this country would still be in good repute if men had not schemed against it? We hope for remedies outside man as a cure for our ills and yet each and everyone of us knows that the success of any organization of people will depend upon the attitude and actions of the individuals who form its membership. As with a government so it is with a dental organization. In Canada we have slightly more than four thousand men and women who have qualified to practice dentistry. Approximately seven hundred of this number are now in the army. If each of us in Canada would resolve that our planning and our actions would be directed toward greater usefulness, there might not be much time available for adverse criticism of our Government or our dental organization. More and more the ability to get along with people is being appreciated and valued. If each of us will take his confrères, his relations and his neighbours as they are and do the very best he can—well, frankly he has a job on his hands because after the injustices of the social order are remedied and the people capable of being employed are at work we still have the problem of obtaining the services of all the dentists in private practice for the local society, the provincial organization and the Canadian Dental Association. Then and then only can we have that unity and zeal which should characterize a group of people who say "United we Stand". We stand for, (quoting ethics) "the best possible service at a reasonable fee".

Let us keep in mind that the problem of dental attention for the millions who are not in receipt of this service is a mighty one. It is our problem. We must measure up to and overcome this difficulty if we are worthy members of our profession and of the democracy in which we live.

Peace is the fruit of justice.

The Forum

• WHAT OF THE FUTURE?

Editorial by Professor J. Reid Burt in New Zealand Dental Journal, Sept. 1941

AT THE moment there is much talk of post-war reconstruction and the new world that is going to evolve from the chaos created by the present desolating upheaval in Europe. But what this new world is going to be like we can only surmise, for the battle has yet to be won or lost, and the fate of many nations still hangs in the balance. Of one thing, however, we can be certain, and that is when the sun finally sets on the stricken field and the Angel of Peace returns, the world of yesterday will be no more; for the old type of society and the old way of living will be but a memory, and humanity will awaken in the cold grey dawn of a new era amidst changes that are likely to have far-reaching repercussions in every sphere of human endeavour. The present, apparently, is the end of an age; indeed, it looks as if it is the end of economic man, and that the new epoch of civilization which we are approaching might best be described as the age of social man. This seems to point to the fact that society henceforth will be much more of an organic whole, tied together, as one writer has recently suggested, by the living relations of human beings instead of mainly by the cold impersonal forces of profit and economic competition. How much there might be in this prophecy remains to be seen, but as the English speaking race stands resolutely for the democratic ideal, it might be assumed that the new social order will have to evolve along democratic lines. Yet, if this is to transpire, it becomes obvious that the democracy as we know it today, will have to undergo some radical changes and retranslate many of its cher-

ished ideas into a new language if it is to fit in with the new social frame. Suffice it, therefore, if we recognize that even at this moment the old order is passing, and that the present war upon which our thoughts are concentrated, is but an episode in a great world revolution in which the myths, shared beliefs, and emotionally charged ideas essential to the material organization of society, and which in turn give it direction, are being swept away and replaced by new ones more closely connected with the concrete realities we are being called upon to face. Consequently, amidst the many changes which are already apparent, and which will be accelerated after the war, it is only natural that we should turn to our own profession and endeavour to envisage its place and future orientation in the new scheme of things.

Recently, there has been mention of Social Security, and the possibility of dentistry being brought within its scope by the establishment of a State service that would place dental care and attention within the reach of everybody. That such a service might have much to recommend it is beyond all doubt, but a great deal would necessarily depend on the manner in which it was organized. For instance, in any scheme for mass dental care, the first thing to recognize would be the utter futility of basing it on the present philosophy of dental practice, which would probably result in the wholesale supply of artificial dentures, and be on a par with the wholesale supply of drugs which constitutes one of the main, and seemingly most attractive features, of the Medical Practitioner Service which the Government is at present seeking to establish in the Dominion. But neither the supply of cheap dentures

nor drugs represents the correct orientation of a sound health service. Rather do they represent failure and frustration, and a hopeless effort to stem the tide of disease when in headlong flood rather than at its source. If a State Dental Service is to be a feature of the new order of things, it will have to be a comprehensive one, based on broad public health principles. This means that there will have to be a transition from the point of view that embraces merely the individual patient, to one that considers the population as a whole, with greater attention given not only to the prevention of dental ills, but also to the maintenance of dental health where it already exists. But before this can take place dentistry will have to embrace a new philosophy which, in turn, will demand the practical application of many branches of the science that at present are mere themes for academic dissertations. And among these branches none is of greater importance than periodontology; for just as many, if not more teeth, are lost through pyorrhea as through caries.

Finally, we suggest that the profession would be well advised to give immediate and serious attention to many of the problems that will have to be faced in the building up of the new social fabric. It is not enough to try and guess what is on the other side of the hill. The thing is to set about climbing the hill now, and make certain before it is too late, in order that the initiative might be taken in any post-war scheme for the betterment of the dental health of the Dominion. And that this is not what it should be, is confirmed by the fact that between 50 per cent. and 60 per cent. of our soldiers who have gone overseas are wearing artificial dentures, and require a mobile prosthetic laboratory to accompany them to maintain their efficiency in the Field. This surely represents a serious reflection on the organization of dentistry

in the Dominion, and suggests a most uneven balance between the curative and preventive aspect of the calling. However, whatever may be the cause of such a regrettable state of affairs, the time has arrived for the profession to adopt a broader view of its responsibilities in the field of public health. If it fails in this respect, then it will only have itself to blame if both the standards of training and practice are lowered.

Sir Walter Fletcher, speaking on "University Ideals and the Future of Medicine" before the University of Pennsylvania, in 1930, predicted that the physician of the future will find his work concerned more with the healthy body and healthy mind. Let us hope that something of a similar nature will also apply to the dentist of the future, and that he will find the greater part of his work in the preservation of a healthy mouth, and in the prevention of dental and oral disease, rather than in repair and replacement.

• SYSTEMIC EFFECT OF ORAL AND UPPER RESPIRATORY INFECTIONS

by WILLIAM B. RAWLS, M.D.,
New York City

(Excerpts from N.Y. Jour. of Dentistry, March, 1941)

PROCEDURE suggested for patients with suspected foci of infection:—

Abscessed teeth. An abscessed tooth must be extracted. There is no alternative.

Devitalized teeth. This is probably one of the most controversial subjects in medicine. There are many factors to be considered before ordering removal of devitalized teeth. Particularly in women, the extraction of teeth is a serious matter, especially if it produces a bad cosmetic effect. Moreover, a devitalized tooth often carries a bridge and extraction may necessitate the trouble and expense of a new one. Occasionally, the extraction of one tooth may change the whole mechanics of dentition and

cause poor occlusion. These are only a few of the factors involved and I believe that all physicians should make an effort to obtain a better understanding of them. Usually I discuss these factors with the patient's dentist and try to reach a decision most satisfactory to all concerned. With few exceptions bridgework should not be attached to a devitalized tooth because it is a potential source of infection. This is even more important when there are signs of bacterial intoxication such as soft tissue rheumatism, bronchitis, rhinitis, etc. If there are no signs of bacterial intoxication and if it is explained to the patient that a devitalized tooth may at a later date become infected, I believe it is justifiable to advise against extraction. Under these conditions, there can be reconstruction around a devitalized tooth. However, the teeth should be checked periodically. When there is a devitalized tooth and signs of bacterial intoxication and the patient objects to extraction, he is advised that the devitalized tooth may be a focus of infection and if not extracted it may prevent improvement. If he is then willing to take the chance, he is treated for an agreed length of time. However, if there is no improvement after that, another check of the teeth should be made and extraction of suspicious teeth advised.

Pyorrhea. This type of focal infection is too frequently overlooked. The amount of absorption depends to a considerable extent on the number and size of closed pockets. In many instances they produce as much toxin as an abscessed tooth and should be treated. For example, a woman aged fifty-four had marked rheumatoid arthritis and the toxic syndrome described previously. In addition she had severe dizziness which was so pronounced that she was afraid to venture alone on the street. Changing from a recumbent to a sitting position required about two minutes. X-rays of the teeth on two

occasions revealed no devitalized teeth and no periapical infection but there were large pyorrhæal pockets. There was no sinusitis and the tonsils had been removed. Because of the severe pyorrhea, the dentist advised extraction of several teeth. Following this there was a definite exacerbation of the arthritis and dizziness. Four weeks later the arthritis was better than for several months preceding the extraction and the dizziness had entirely disappeared.

• PENETRATION OF PHENOL IN TOOTH STRUCTURE *

by B. O. A. THOMAS, D.D.S., New York
(Condensed from the *Journal of the American College of Dentists*)

THE object of the investigation was: (1) to determine whether phenol is self-limiting in its action on tooth structure; (2) to study the effect of phenol (when used in cavity sterilization) on the dental tissues.

In vitro experiments, utilizing the bromine water test, and with eosin Y as a tracing agent, proved that phenol will penetrate from the pulp cavity to the surface of the tooth in less than 24 hours. *In vivo* and *in vitro* experiments, also utilizing eosin Y, showed that phenol will penetrate from a cavity to the pulp.

Histologic evidence was obtained which indicates that phenol will irritate the pulp and cause an inflammatory reaction. Control cases are presented to show that the reaction of the pulp is not due to the cavity preparation.

Metamorphosed dentine is impermeable to phenol, as shown in this study.

Concentrated phenol will coagulate organic matter. Conceivably the dental lymph in permeable dentine will dilute the phenol so that it acts as an irritant rather than an escharotic when it reaches the pulp. This irritation usually stimulates the pulp to protective measures.—*Dentistry, a Digest of Practice*, July, 1941.

• AESTHETICS IN PROSTHETICS

by W. LES WARBURTON, D.D.S., Salt Lake City, Utah

(Condensed from North-West Dentistry, October, 1941)

WHEN considering aesthetics we must begin with the contouring of the external features of the face. Three factors enter into a study of facial contour: namely, vertical dimension, arrangement of teeth and wax contour. The use of contoured "plumpers" is recommended in almost every denture in order to give proper fullness to the lips and cheeks. This is best accomplished by adding contour to bicuspid and molar region. If plumpers are used it is best to add soft wax to the wax try-in outside of the mouth and then, placing the try-in in the mouth, mould the plumper into position with pressure on the cheeks.

The selection as to form can be considered from the accepted classification as to square, tapering or ovoid. After selecting the outline we must then consider the size. Ruggedness calls for large teeth, and a small delicate mouth calls for small teeth, but all too many dentures are made with unnecessarily small teeth. No matter what outline form we have, we should have an exaggerated curvature of the labial surface to better control light refraction. If a flat surface is imperative then this surface should be roughened by surface irregularities to break up the light refraction. Or this flattened surface can be stained to darken the approximal margins and either the gingival or incisal portion, thereby absorbing some of the light.

The study of colour is not such a difficult problem that the dentist cannot improve his sense of colour discrimination by a little effort. A knowledge of colour should be developed with particular attention paid to its dependence on illumination and the influence of complexion and clothing.

When matching the basic colour of pre-extraction cases we often find more than one basic hue within the same mouth. It is this lack of uniformity within colours that helps to build our most aesthetic dentures, as compared to the monotony of colour in the sets produced by manufacturers. Much can be done to improve aesthetics by breaking up the colours using teeth of probably three different shades.

If all factors of colour are considered, very few manufactured teeth meet the requirements of aesthetics; therefore, colour is controlled by selecting the teeth most nearly meeting the requirements and staining each individual tooth with mineral oxides.

To develop a power of discrimination as to tooth arrangement we must make a study of the natural teeth. The aesthetic arrangement of teeth does not necessarily mean an irregular arrangement, although a symmetrical arrangement always invites suspicion of the artificial. Factors governing the arrangement of teeth are:—arch form, profile type, relationship to occluding teeth and relationship to approximating teeth. Phonetics and arrangement of teeth are so interdependent that if a careful study of the case is not made faulty speech will occur.

To develop an ability to reproduce aesthetic dentures we must have a complete set of pre-extraction records. The making of such records should include photographs, masks, profile templates, measurements, impressions, colour and form selection and charting of any defects that might aid in the reproduction of individual characteristics.

Only as we imitate the defects and characteristics of an individual case can we expect to have a natural appearing denture; and only as we develop skill and ability to imitate can we expect to create an aesthetic denture.

• AN EVALUATION OF THE DENTAL TREATMENT PROGRAM, DENTAL DIVISION, DEPARTMENT OF HEALTH, NEW YORK CITY

by HARRY STRUSSER, D.D.S., Chief of the Dental Division, New York, N.Y., and Henry C. Sandler, D.M.D., Supervising Dentist, New York, N.Y.

(Conclusions of report in N.Y. Jour. of Dentistry, Dec., 1941.)

STANDARDIZED and supervised dental operative procedures as practiced by the Dental Division of the Department of Health of New York City are very effective in the prevention of loss and preservation of function of the teeth in the mouths of young children.

These procedures when practiced among children under seven, treatment begun as early as 5 years of age, or as soon after eruption as possible, prevent the loss of the first permanent molars to a very high degree.

The filling or extracting of carious teeth does not seem to prevent the initiation of new carious lesions in the remaining teeth.

• WHAT CAN THE DENTAL HEALTH WORKER TEACH REGARDING NUTRITION AND DIET?

by WILLIAM R. DAVIS, D.D.S., F.A.P.H.A.

Director, Bureau of Public Health Dentistry, Michigan Department of Health, Lansing, Mich.

(Conclusions of paper in American Journal of Public Health)

WHAT can the dental health worker teach in regard to nutrition or diet?

We believe he should teach the importance of a well balanced diet, such as is generally accepted today by competent nutritionists and physicians as important for general body growth, development, and optimum health. All health workers should lend their aid in emphasizing this.

We believe that he should say that the period from birth to 8 years of age is the time when nutrition can play its most important part in building well formed teeth, but he should warn against the idea that any known diet today can guarantee the building of teeth impervious to decay. He can say that a well

balanced diet is important in treating or preventing some forms of gingival disease, such as scurvy.

We believe that he should discourage the use of proprietary preparations to supply the necessary calcium and phosphorus. These can best be supplied in a well balanced diet, as most investigators will agree.

We believe that he should teach the importance of the reduction of sugar and sometimes other carbohydrates for the control of dental decay and because the usual American diet is unbalanced by too much carbohydrate.

We realize very well, however, that if sugar is the great offender in the cause of dental caries, as seems to be the case, we have a very difficult task ahead in making much progress in its control by the reduction of sugar intake so far as the mass of people is concerned. Most people would prefer some decay rather than to eliminate the sweets. The per capita consumption of sugar in the United States has increased something like 100 pounds per person in the past 100 years. But some will heed and some progress is being made, as is evidenced by many a story. We should keep up the admonition and give the evidence as to its harmful effect on teeth. At the same time, let us hope our research workers discover a more practical means of controlling or preventing dental decay.

Though this paper deals only with nutrition and the diet, we cannot refrain from mentioning the other factors in a good dental health program. Early and periodic care by a conscientious and competent dentist, starting at 2½ or 3 years of age, cannot be overemphasized in the promotion of dental health under present conditions. Proper and regular use of the toothbrush is also desirable not because it will prevent decay, but because it can aid in reducing decay on the exposed surfaces of the teeth, and also aid in maintaining healthy supporting tissues.

• **NUTRITION AND LONGEVITY**

by JOHN B. FITTS, M.D., F.A.C.P., Atlanta,
Georgia

(Condensed from *Medical Times*, November, 1941.)

TWO years ago it occurred to me that perhaps something could be learned from the study of the food habits of aged people from 80 to 100. I have studied the dietaries of 100 individuals in the age group.

What, then, are the conclusions that can be drawn from the dietaries of these octogenarians? They are free from food fads. As a whole their diet is representative of the modern-day diet. It contains adequate protein, carbohydrate and fats. Their diets in calcium and phosphorus are far better than a middle-aged group, because of the amount of milk used. The group is predominantly lighter in weight, averaging one hundred and thirty-five pounds. They retained as many or more teeth than a similar number of the middle-aged group.

In my opinion the real secret of the old age of this group lies in the quality of their foods in the first five decades of their lives. The facts seem to indicate that the quality of food in this country was at its best from 1750 to 1850. There was a good supply of home grown food pleasantly varied. The mechanical and chemical age had not arrived. Machine milling was not introduced into this country until 1870, and the processing of beet sugar was begun by the Germans in the latter part of the eighteenth century, and that of cane sugar at a much later date.

The teeth of our ancestors showed perfect spacing and freedom from decay. That is a contrast to the present generation with faulty dental arches, overcrowded teeth, and rampant dental caries. I mention this because the dental structures have a direct nutritional basis.

The individuals in the group study

were born between 1835 and 1860. In those days there was no 'white flour, white sugar, white rice, and canned goods. They ate the coarsely ground whole grains and the lean meats.

Unquestionably, the finest study in human nutrition appears in the book of Dr. Weston Price, entitled "Nutrition and Physical Degeneration," just off the press. He visited and studied the primitive diets in various parts of the world and compared them in their effects to the modern diet. He proved beyond question the blight of the white man's diet on these primitive people, and his careful studies very conclusively show the effect on the second generation after adoption of the modern-day diet as evidenced by faulty arches, facial asymmetry and lowered resistance to disease.

I think Dr. Price and other workers have found the real key to the present-day problem confronting the present generation. It lies in the nearly insurmountable handicap of depletion of the quality of the minerals of the soil.

The practical aspect of the subject lies in the fact that we can apply the knowledge already known of nutrition. While old age may not be attained, we can protect and make more comfortable and self-sufficient the elderly patient. We can prevent the anemias, the deficiency diseases, the various arthritides so prevalent in old people, the eye changes resting on a nutritional basis; and the resistance of aging tissue to infection can be raised.

The protective foods should be supplied in all the age groups. The oldest group needs minerals and vitamins as vitally as a growing child. We can encourage the use of whole grain in bread and cereal, the wider use of fresh vegetables and fruits, the greater use of dairy products and lean meat, and we can restrict the excessive intake of energy-producing foods.—*Medical Arts Building.*

• **DIET IN RELATION TO DENTAL CARIES**

by ELMER V. McCOLLUM, Ph.D., Sc.D., LL.D.,
Baltimore

(Condensed from the University of Pennsylvania
Bicentennial Conference, Symposium on Dental
Caries.)

THE recorded experimental data seem to warrant the acceptance of the following conclusions:—

If the nutrition of the individual is optimal during the developmental period of the teeth, their structure will be safeguarded, and freedom from structural defects such as pits, fissures, hypoplastic enamel, may be expected. It would seem that dense, thick, hard enamel must afford some degree of protection against dental caries.

A state of optimum nutrition appears to afford marked protection against dental caries. It seems certain that such protection is in considerable measure due to some property of the mucous secretions or of the saliva or both, which tends to suppress the growth or functions of micro-organisms whose presence in large numbers would be inimical to the health of the teeth.

Subsistence throughout life on a strictly carnivorous diet will prevent caries. This diet would be impractical in most parts of the world, and if practicable, would be less satisfying than is a mixed diet. The presence of considerable carbohydrate in the diet is necessary for the development of carious teeth.

There seems to be good evidence in support of the view that the regular consumption of a diet in which all the essential nutrients are present in adequate amounts, and in which the ratio of fatty acids to total carbohydrate (including the sugar which may arise from protein and

glycerol) is not less than 1.5:1 prevents caries. This is equivalent to saying that a diet, suitable for the diabetic, is so constituted as to afford protection against caries, and even makes possible the arrest of the carious process in open cavities. This protective action of excessive fat in the diet may possibly be due to greasing the tooth surface, and the cavity surface, thus waterproofing it and preventing access of water soluble acids (e.g. lactic acid) to the enamel surface.

There seems to be good evidence that the elimination of sugar from the diet, and the provision of carbohydrate in the form of starch, affords a less favourable oral medium for the development of acid-forming organisms, and so protects the teeth against acid decomposition.—*Dentistry, a Digest of Practice, August, 1941.*

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• **SIX POINTERS**

1. Acquire, early in life, the habit of regular dental inspection, treatment and filling of cavities.
2. Eat a fortified, well balanced diet and one that is low in sugar.
3. Tooth brushing, properly done, can accomplish a few worthwhile objects.
4. Mouth habits affect the arrangement of teeth.
5. Drugs and proprietary preparations, should be used only on the advice of dentist or physician.
6. Develop in the child the concept that a dentist is a friend and not an ogre to be feared.—“*A Six Point Dental Health Program*,” Commonwealth of Pennsylvania Department of Health, per *Dentistry, a Digest of Practice.*

Conventions

MIDWINTER MEETING OF THE CHICAGO DENTAL SOCIETY, PALMER HOUSE,
CHICAGO, FEBRUARY 23-26, 1942.

75TH ANNUAL CONVENTION OF THE ONTARIO DENTAL ASSOCIATION, ROYAL YORK
HOTEL, TORONTO, MAY 18-21, 1942.

(Dentists from the U.S. and from all parts of Canada will be welcome.)



PRINCE EDWARD ISLAND



Editor—M. H. GARVIN, Winnipeg

A S S O C I A T E E D I T O R S

SASKATCHEWAN



D. T. Wayne, Charlottetown

NOVA SCOTIA



S. G. Ritchie, Halifax

QUEBEC



E. M. Laurin, Montreal

ONTARIO



T. R. Marshall, Toronto

F. C. Harwood, Moose Jaw

ALBERTA



John Clay, Calgary

NEW BRUNSWICK



W. C. Carruthers, Saint John

MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



J. S. Bricker, Vancouver

Gum Chewing

The pernicious habit of gum-chewing was brought forcibly to my attention the other day when upon tipping up a chair in the office reception room six wads of gum were stuck to the under surface of the seat. This was apparently the easiest place to dispose of it when patients were called to the operating room.

In a check-up on one of our leading Winnipeg moving picture theatres it was found that they scrape up from the floors of this theatre an average of two pounds of chewing gum a week. This does not include what is placed on the under side of the seats and which frequently sticks to ladies' stockings, dresses or furs and when complaints are made involves the theatre in cleaning accounts.

What about this habit of gum-chewing which seems to be becoming a national pastime? A dentist is often asked if the chewing of gum is harmful or helpful. In its ordinary form it is being popularized over the radio in the most subtle manner imaginable. Recently an American Corporation represented its product as being capable of doing away with a gray or dingy condition of the teeth; of ridding one of unpleasant breath; of enabling a person

to remain awake and alert while driving his car; of increasing the vitality or strength in men, women and children due to the dextrose content; of being of material benefit in developing well-arranged teeth in children; of constituting a beauty treatment through the exercise of facial muscles, by keeping the facial muscles young; of aiding in the treatment of a great variety of oral disorders or dental diseases such as gingivitis, alveolar atrophy, acute and chronic Vincent's infection and periodontoclasia. It is interesting to note that this Corporation has been forced to enter into a stipulation with the Federal Trade Commission of the U.S.A. in which it agrees to discontinue this type of publicity.

A few months ago another prominent gum company distributed a beautifully illustrated booklet which, it was stated, was prepared for the dental and associated professions. It outlined what was called a functionally efficient means for counteracting pathologic tendencies and stimulating vigorous oral health by chewing gum. A number of our most prominent and most highly regarded dentists were quoted as emphasizing the importance of proper mastication in order to develop healthy jaws; the importance of vigorous chewing habits in order to stimulate healthy tissue reaction, and the importance of function in the treatment of lowered resistance. The inference was that in all of these cases these results could be obtained by acquiring the gum-chewing habit, although probably most, if not all, of these writers had not gum-chewing in mind in any shape or form when making these statements. It was also stated that in a certain orphans' home extensive tests revealed that the systematic chewing of gum tends to prevent the deposit of calculus, and also that bite strength is increased when the masticatory muscles are exercised by the systematic use of chewing gum. It was further stated that in these recent clinical studies it has been shown that tooth scrubbing and the salivary flushing provided by the systematic use of chewing gum definitely helps to inhibit the incidence and progress of caries in susceptible children and that is why so many dentists recommend—gum.

As one reads these striking statements about inhibiting the incidence and progress of caries which are of tremendous import to the dental profession as well as to humanity, if such statements are correct, one notices an asterisk referring to the reference column at the end of the booklet where in small type the information is given that these particular statements are taken from an unpublished report from a dental school of a large university. One cannot help but wonder why such important news should not have been published by this large university and what is the name of this great university and whether other factors are involved which would prove detrimental to the gum manufacturing industry if the report were published.

I am quite aware that certain authors have favoured the use of gum to correct certain mouth pathosis. In October, 1911, in *American Medicine*, Kerr points out that chewing gum is very desirable in keeping the buccal cavity clean, particularly in diseases of children. This method was tried for

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"No, no, madam. You don't stick the gum in your ears to relieve the air pressure. You *chew* it!"

months in cases of typhoid fever, scarlet fever, measles and diphtheria, always with beneficial results according to Kerr!

In the Dental Register, December, 1914, Dr. Kleinsoryen of Elberfeld states that the treatment of a child where jaws have been neglected in infancy should include a systematic gymnastic for the jaw lasting for a quarter of an hour, at least twice a day. It is stated that a suitable chewing gum may be used for the gymnastic, but that a better medium is a hard carrot which may be chewed to a pulp; or the chewing of grain is also effective and wholesome.

No one could object to the use of gum for a quarter of an hour twice a day under dental direction. In certain special forms gum is advocated for the correction of traumatism. These abrasive gums, however, should always be used under the direction of a dentist. They have also a recognized place in the balancing of artificial dentures.

If one receives relief by chewing gum while flying at high altitudes of course there can be little objection. There may be many cases where chewing gum for a limited period may prove helpful but this writer believes that incessant chewing of gum from morning until night, which is such a common practice among many people in these days, is definitely harmful and that some worthwhile research should be undertaken in this field immediately.

There are many adults with advanced periodontoclasia who are driving infection into the blood stream every time they attempt to masticate anything. To make this a continuous process during working hours cannot be anything

but harmful. At times, following treatment, rest is most beneficial over considerable periods, not excessive exercising.

Dr. Willa Yeretsky, in the *Journal of the Michigan State Dental Society*, quotes the case of a man who complained of a burning sensation over the entire area of his mouth, tongue and lips with lesions consisting of numerous small vesicles and of three weeks' duration, due to what was diagnosed as contact allergy from gum-chewing. The patient had given up smoking and for the period mentioned had chewed gum constantly. The condition cleared up in ten days following cessation of the gum-chewing habit.

In the November 19, 1941, issue of the *Proceedings of the Mayo Clinic* an interesting case is reported of a nine-year-old boy who was anaesthetized with nitrous oxide, oxygen and ether. It was pointed out that it should be emphasized that following inhalation anaesthesia, especially when ether has been used, direct inspection of the patient's glottis and pharynx is important for the successful removal of mucus or any material which may be eructated from the stomach. This was done in this case with the result that a piece of chewing gum measuring 1.5 by 1 cm., which undoubtedly had been eructated from the stomach, was seen lying in the pyriform sinus. This was removed and then a smaller piece measuring 0.5 by 0.3 cm. was seen lying just at the entrance to the glottis. This was also removed. The chewing gum had apparently been swallowed the evening before and had remained in the stomach until the time of the operation. It is quite obvious that in this instance this foreign body could have been easily aspirated into the lung, causing atelectosis or other serious sequelae.

Dr. James David McCoy, in his latest book entitled, *Applied Orthodontics*, has this to say about gum-chewing: "Dr. Alfred P. Rogers emphasizes the fact that 'gum-chewing', so frequently prescribed by dentists as a means of muscle culture, is essentially non-scientific, and may be productive of much harm. Especially is this true where the inclined planes have assumed unnatural relations, for the more they are used under such conditions the more severe the malocclusion is apt to become, owing to the fact that they are in positions of mechanical disadvantage. Even after the arches have been developed, and the patient has acquired the ability to occlude the inclined planes normally, its merits are dubious. This is apparent when we realize that the act becomes a subconscious habit and thereby loses the value which comes from conscious control of the muscles which is essential if a harmonious unification of the developing structures is to be realized."

The matter of most concern, however, is the possibility of producing a condition where caries becomes rampant. If the saliva has anything to do with the prevention of caries, and most dentists believe that it has, then it is reasonable to suppose that this protective fluid may become weakened and the glands which produce it become less potent as a result of excessive stimulation. I have seen a number of cases where the extent of dental caries could not possibly be accounted for on the basis of diet and which condition

seemed to definitely improve after insisting that this habit of chewing gum constantly be stopped. I am not presuming to say that this connection has been established. It is simply the observation of a few dentists who have been concerned about this problem with all due respect to "the dental school of a large university" whose report has not yet been published. It is a matter, however, which should receive scientific investigation, not by some corporation, but by members of the dental profession.

Then apart from any possible harm which gum-chewing may do to the mouth or to the general health by weakening one of the body's digestive fluids there is the question of appearance, of culture, of character development. We insist that our own assistants do not chew gum during office hours yet too often we do not urge some other man's employee to desist. The young men and women who march down the street chewing gum belittle themselves in the minds of the onlookers, and detract from their appearance. There is a certain amount of character depicted in every face and everything possible should be done to develop it along proper lines and not weaken it by gum chewing. Thackeray says, "Nature has written a letter of credit upon some men's faces which is honoured wherever presented. You cannot help trusting such men; their very presence gives confidence. There is a 'promise to pay' in their very faces which gives confidence, and you prefer it to another man's endorsement." Another writer has said, "*Character is power*. Hang this motto in every school in the land, in every home, in every youth's room. Mother, engrave it on every child's heart." I say let dentists awaken to this problem of gum-chewing and instil into the minds of their patients the possible danger of this deplorable habit.

BOOK REVIEW

Year Book of Dentistry, 1941. Edited by Charles G. Darlington, M.D., Professor of Pathology, New York University College of Dentistry; George W. Wilson, D.D.S., Professor of Operative Dentistry and Assistant Dean, Marquette University Dental School; Howard C. Miller, D.D.S., Chicago, Ill.; Walter H. Wright, D.D.S., Ph.D., Associate Professor of Prosthesis, School of Dentistry, University of Pittsburgh, and George R. Moore, D.D.S., M.S., Professor and Head of the Department of Orthodontics, School of Dentistry, University of Michigan. Published by the Year Book Publishers, Inc., 304 S. Dearborn Street, Chicago. 792 pages and 394 illustrations. Cloth. Price, \$3.00.

The 1941 Year Book of Dentistry reviews the dental professional literature for the pre-

vious twelve months. The Publishers claim that it will put the details of 68 up-to-the-minute techniques at one's disposal, give new facts on 52 different types of operations and 177 general treatment methods, supply fresh data on 94 diagnostic measures, and give up-to-date aspects of the management of 70 dental diseases and abnormalities.

This book gives the essential facts of 381 articles selected from 93 journals, being the joint product of 397 authors as well as five editors. Despite the war 24 per cent of its contents is drawn from the literature of 12 foreign countries.

This international reference book is an encyclopedia in its scope and will enable one to keep up with world-wide developments at a time when ordinary avenues of professional intercourse are closed.—M.H.G.

CORRESPONDENCE

Important Pronouncement from Ottawa Affecting All Canadian Dentists

Ottawa, January 7, 1942.

To Dr. Don W. Gullett, Secretary,
Royal College of Dental Surgeons of Ontario.

I have your letter of December 31, in which you raise the question as to whether or not a girl who has graduated from a course in dental nursing given at the Faculty of Dentistry, University of Toronto, or a girl who is taken into a dental office without previous training and gained her training as a nurse from practical experience, should be considered as professional nurses under the terms of the Act.

The Act refers to professional nurses for the sick and also refers to those who are probationers undergoing training for employment as such nurses. It is my belief that it was the intention to exclude from coverage trained nurses. Accordingly, I do not feel that the Commission would be justified in including the girls in the two categories you speak of as being excepted.

It might be said, with a good deal of reason, that the girls in the classes you speak of were not considered and they might argue that they were entitled to exception.

On the other hand, it is my belief that the nursing profession was excluded largely due to the difficulty there would be in collecting contributions from the employer, which, of course, does not apply in the case of girls working regularly for the same dentist.

While the Act does not say so, it does seem to me that the terminology used implies that the exception should be restricted to those who are trained for the profession of nursing the sick and that the terminology is not sufficiently broad to include girls who are trained for the special duties which may be required of them in a dentist's office.

(Signed) A. MACNAMARA,
Acting Chief Commissioner.

DENTAL CORPS NEWS

News from M.D. 10, Headquarters, Winnipeg

Dentists at Hong Kong

The fate of C.D.C. members at Hong Kong is of great concern to this Company, as five of the seven there were from M.D. No. 10. These were Capt. J. C. M. Spence, of Fort William; Sgt. E. M. West, chair assistant, Winnipeg; Cpl. G. F. Paul, technician, Winnipeg; Pte. T. W. Dwyer, Port Arthur and Capt. W. R. Cunningham, Souris, Manitoba. Capt. Cunningham had previously been posted to M.D. No. 5 and proceeded with the Quebec Rifles. His assistant and orderly were from Quebec.

Bowling

The headquarters bowling team of Midgley, Currie, Sewell, Kittson, Nix and Tevendale won the first series of the military bowling league. The Laboratory team secured third place.

Christmas Entertainment

The Christmas family get-together of Nos. 30 and 38 Companies on December 15 at St. George's Church Hall was a splendid success. Over 125 were present including about 50 children who, in addition to the usual eats were supplied generously with dainties, fruit, candies and coca cola.

The sing-song led by Sgt. Nix was splendid and the entertainment party of the Legion was greatly appreciated. The evening closed with sound movies put on by Auxiliary Services. The refreshments were served by the C.D.C. Ladies Auxiliary.

Captain Fell Enlists

Capt. R. W. Fell, who recently assumed duty, joined the C.A.D.C. in 1915, seeing service in Canada, England and France. He has five children, two of his sons now serving with the R.C.A.F. in England.

Lieut.-Col. C. B. Climo, D.C.M., E.D.

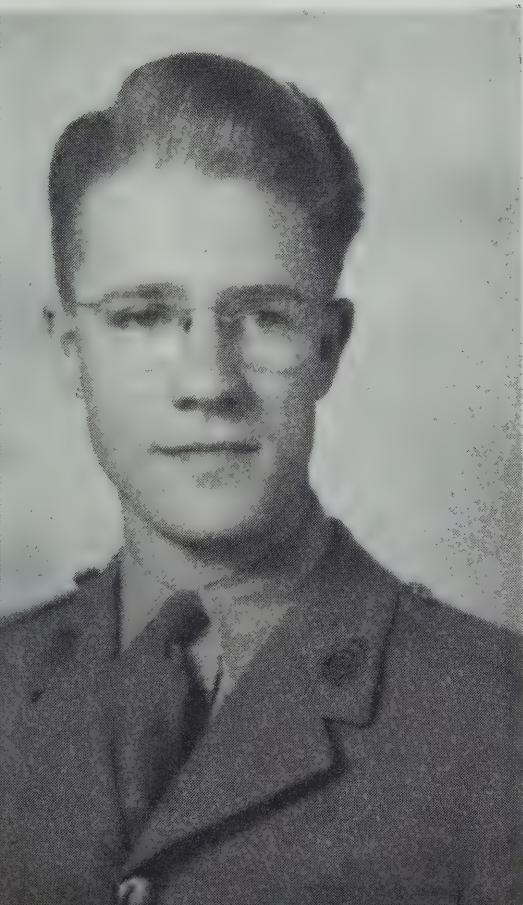
He served in France with the field artillery in the last War, and continuously with the militia since that time as an officer in the 1st (Halifax) Coast Brigade, R.C.A., which unit was called for Active Service in the precautionary period immediately prior to the outbreak of the present war.

While serving in France he was awarded the Distinguished Conduct Medal. He also holds the Canadian Efficiency Decoration for long service.

Transferred to the Canadian Dental Corps as D.D.O., M.D. 6 on the formation of No. 6 Coy., C.D.C., and appointed Command Dental Officer, No. 3 Training Command, R.C.A.F., Montreal, in August 1940.

He conducted a practice in Halifax, being active in professional and public service, a past president of the Halifax Rotary Club, and Secretary-Registrar of the Provincial Dental Board of Nova Scotia.

Lieut.-Col. Climo is married and has two children.



2nd Lieut. C. G. Hunt, Quartermaster

2nd Lieutenant Hunt enlisted on November 13, 1939 with No. 23 Company, Canadian Dental Corps, Kingston, Ontario. From here, he was posted to Dental Corps Headquarters, Ottawa, as a Q.M.S. and later served with No. 24 Company, Canadian Dental Corps, Montreal.

On September 12, 1941 he received an appointment as 2nd Lieutenant and is now Quartermaster of No. 35 Company, C.D.C. (R.C.A.F.) Eastern Air Command, Halifax, N.S.

He served six years with the Ash Temple Company, Limited, in Toronto.



OFFICERS AND OTHER RANKS OF A COMPANY OF THE CANADIAN

FRONT ROW, *left to right*: Pte. McEnaney, E. R., Pte. Prins, H., Pte. Handy, W. J., L/Cpl. Furgusson, C. K., Pte. Bogstie, G. O., Pte. Murphy, J., Pte. Brown, K. F., Pte. Bishop, T., Pte. Thompson, L. C., Pte. King, D. V., C.S.M. Ferguson, A. L., S/Sgt. Guerin, M. D., Pte. Hunter, R. G., Pte. Allison, R. W., Pte. Wark, R. H., Pte. Champion, A., Pte. Leroux, A. C., Pte. Wagner, E., Pte. Edgar, O. K.

SECOND ROW, *left to right*: Lieut. J. Finmark, Capts. K. C. Wasson, H. E. Simmons, J. E. Campbell, G. H. Page, A. J. Gardner, C. C. Smart, M. Wachnow, M. Lamarche, S. K. Wetmore, Lieut.-Col. E. F. Allen, Capts. C. G. McKenna, C. F. Lewis, S. Goodman, C. S. Slack, R. R. Butler, R. H. Aljoe, J. E. Hesson, F. W. Dyer, R. F. Butler.

THIRD ROW, *left to right*: Pte. King, A. W., Pte. Tweed, G. B., Sgt. Delaplace, R. A., Sgt. Giles, A. J., Sgt. Wylie, J. T., Sgt. Sargent, C. M., Pte. Brown, M. L., Sgt. Devitt, O., Sgt.

New Ruling on Admission to Dental Corps

DEPARTMENT OF NATIONAL DEFENCE

—ARMY—

Ottawa, Ontario,

December 31st, 1941.

To: All District Officers Commanding.
C.D.C. Officers

The following is an extract from a recent Privy Council Order relative to the eligibility of dentists for the C.D.C. during the period of the war:

"That during the period of the present war with the German Reich, and of demobilization thereafter, the provisions of paragraphs 145 and 160 of the King's Regulations and Orders for the Canadian Militia, 1939, shall not apply with respect to appointments of dental officers to active formations, units and detachments of the Canadian Dental Corps. Persons who are graduates of dental colleges, in Canada, or in the United States of America, whose academic standards are such as are acceptable to the Director Dental Services, shall be eligible for appointment as dental officers, in active formations, units and detachments of the Canadian Dental Corps, provided their professional and other qualifications



DENTAL CORPS THAT HAS RECENTLY ARRIVED IN ENGLAND

Hutt, L. R., Sgt. Martel, H. V. A., Sgt. Schumacher, E. L., Sgt. Sherry, J. M., Pte. Steward, H. W., Pte. Clancy, V., Pte. Conger, C. E., Pte. Rivest, A., Pte. Aymar, J. D., Sgt. Hoyt, H. R., Pte. Gordon, G. M., Pte. Stiff, H., Pte. Kerr, S.

FOURTH ROW, *left to right*: Sgt. Punt, R. H., Pte. Haskell, R. W., Pte. Moore, N., Pte. Kane, G. T., Pte. Craig, R. S., Sgt. Connors, J. D., Sgt. Currie, R. H., Pte. Deshaey, A. D., Sgt. Davidson, J. E., Pte. Waighorn, A. E., Sgt. Watters, R. A., Pte. Bambury, B. K., Sgt. Sears, J. L., Sgt. Doherty, D. J., C.Q.M.S. Brophy, W. G., Sgt. Heon, L. G., Sgt. Johnson, D. H., Sgt. Harry, T. G., Sgt. Rene, R., Sgt. Randall, K. S., Sgt. Riddell, D. W., Sgt. Denyar, C. W., Pte. LeGrange, A. W., Sgt. Nadeau, A. H., Pte. Joly, J. A., Pte. Dunse, R. W., Pte. Davison, J. J., Pte. Green, V. M., Sgt. Pearson, R. C., Pte. Vrunsedale, N. C., Pte. Jollimore, G. W., Pte. Price, D. C., Pte. Norris, W. J., Pte. Stonehouse, W., Pte. Taylor, D., Pte. O'Leary, J. W., Pte. Barry, G. S., Pte. Goupil, N. J. P., Pte. Hurshman, E. A., Pte. Truman, W. K.

are such as are, in the opinion of the Director Dental Services, equivalent to those required by said paragraphs 145 and 160 of the King's Regulations and Orders for the Canadian Militia, 1939."

2. It is intended that Canadian graduates if equally qualified and available, should receive priority of appointments, but if not available, licensed dentists in the United States of America, can be recommended. If and when making such recommendation, documentary evidence must accompany each to show the professional qualifications of the dentist concerned, the degree held, any license to practise in the locality of residence, and standing in

the community, etc., for consideration at this Headquarters.

3. Qualifications will be considered only if equivalent to Canadian standards for admission to the C.A. (A.F.).

4. No assurance in any form must be given an applicant until authority is received from National Defence Headquarters.

Editor's Note: Paragraph 145 of King's Regulations and Orders contains clauses to the effect that a dentist is first commissioned in C.D.C. Non-permanent Active Militia, is a resident of the recruiting area and matriculated in a recognized Canadian University.

Paragraph 160 of King's Regulations and Orders states a candidate to be commissioned in C.D.C. must hold a license to practise in one of the Canadian provinces.



**2nd Lieut. E. J. Praught, No. 26 Co'y,
Canadian Dental Corps, C.A. (A)
Halifax, N.S. M.D. No. 6**

He was born in Charlottetown, P.E.I. and was educated at Queen Square School and St. Dunstons University in that city.

He is an accountant by profession and was employed for a time at this profession in the United States, returning to his native city some ten years ago where he followed this same profession.

He joined the Canadian Dental Corps as a Private in November 1939 and has worked his way up to the commissioned ranks.

2nd Lieut. Praught is married and has two children, a boy and girl. His hobbies are fishing and boating.

2nd Lieut. R. J. Rowe

2nd Lieut. R. J. Rowe of Regina, Saskatchewan, is now Quartermaster of No. 37 Co'y., C.D.C. (A.F.) Western Air Command.

Lieut. Rowe enlisted in M.D. 12 on October 23, 1939 as Quartermaster Sergeant of No. 32 Co'y., C.D.C. and served with that Co'y. at Regina, Sask. and Dundurn Camp until March 20, 1941, when he proceeded to No. 37 Co'y., C.D.C., as Quartermaster Sergeant.

He received his commission on April 15, 1941, and qualified as a Lieutenant by completing a four week course at the O.T.C. (W) Gordon Head, B.C., on Sept. 5, 1941, and a two week administrative course at the Canadian School of Army Administration, St. John, P.Q., on Oct. 11, 1941.

This officer was in the employ of the Ash Temple Co. prior to the outbreak of the war.



Sister and Brothers Serve

Dr. Fred Cooper (left) and Dr. Robert Cooper (right) were graduated from the Royal College of Dental Surgeons of Ontario in 1925, and have practised together in Moose Jaw for a number of years. Their sister, Miss Rossie Cooper, R.N., has been their dental assistant. All three joined the service at the same time, Miss Cooper as a Nursing Sister and the brothers as members of the Canadian Dental Corps with No. 40 Company attached to No. 4 Training Command, Calgary, Alberta.

Greetings from Overseas

Christmas Greetings and New Year's Wishes to the staff of the Journal of the C.D.A., and which were much appreciated, were received from Lieut.-Col. W. G. Trelford and a number of the officers in the Canadian Dental Corps overseas.

Ladies' Auxiliary, M.D. No. 10, Winnipeg

The Annual Meeting of the Ladies' Auxiliary of the C.D.C., M.D. No. 10, was held January 12 in the workroom of Hudson's Bay store. It was reported that 157 pairs of army socks and 71 sweaters had been knitted from auxiliary wool; 22 sweaters, 35 scarves, 19 pairs of mitts, 4 pairs of gloves as well as a number of baby garments had been completed for Red Cross civilian relief; 54 dental operators' and assistants' gowns had been made in the sewing-room. It was reported also that 96 parcels and 58 consignments of cigarettes had been supplied to C.D.C. members overseas or leaving on draft and 74 calls had been made on the families of men of the C.D.C.



Miss Rossie Cooper and Brothers Fred and Robert

The following officers were elected for 1942, —Honorary President, Mrs. W. W. Wright; President, Mrs. Kenneth M. Johnson; Vice-president, Mrs. Reeve Morrison; Treasurer, Mrs. John Abra; Recording-secretary, Mrs. C. Black; Corresponding-secretary, Mrs. P. J. Gallagher; members at large, Dr. Olive Cole and Mrs. H. R. Stewart.

No individual dentist, consistent with the ideals and traditions now governing the dental profession can consider himself to be performing his duty toward the safeguarding of the public's health, unless he is in some active, co-operative way aiding his profession in the accomplishment of this broad purpose.—Wilfred H. Robinson, D.D.S., in Jour. of the American College of Dentists.

ERRATUM

Dr. Gullett advises me that a mistake was made in sending in the information relative to Dr. Solon Woolverton whose biographical sketch appeared in the January issue of the Journal.

Mrs. Woolverton is still living and is at present ninety-two years of age.

Dr. and Mrs. Woolverton celebrated their sixty-eighth wedding anniversary last October.—
M. H. G.

NEWS FROM THE PROVINCES

SASKATCHEWAN:

Regina Dental Society

The Regina Dental Society met in the usual place on January 13, with the President, Dr. C. C. Clermont, in the chair. At the conclusion of the business, Dr. M. R. Parkin gave a résumé of some of the articles which appeared in recent dental literature, and Dr. G. E. H. DeWitt described an unusual case of a root in the antrum and its successful removal, illustrating his talk with x-rays of the case.

Dentists in Dental Corps

Saskatchewan is justly proud of the fact, that at the end of 1941 fifty Saskatchewan dentists had enlisted in His Majesty's Forces, most of them in the Dental Corps. With an annual registration of two hundred and thirty-one it represents a high percentage of the total. Fortunately the Council in earlier years built up a surplus and is able now to rebate the annual fees of every Saskatchewan dentist who has enlisted, and has done so since the beginning of the war.

Increased Dues to C.D.A.

The Saskatchewan Dental Council, after assurances of support from dental societies and individual dentists in the Province, recently raised the annual license fee to enable the payment to the Canadian Dental Association of four dollars per member per annum. This payment will be made early in the present year, and it is expected that the other provinces will do likewise as soon as possible, and assist the Canadian Dental Association to be the strong, vigorous organization it can become.

MANITOBA:

Manitoba Dental Association

At the regular January meeting of the Board of Directors of the Manitoba Dental Association one of the most important items of business on the agenda was the passing of a by-law to raise the annual registration dues of the Association from \$10.00 to \$17.00 with a discount of \$2.00 allowed to all members who pay their dues before February 28.

The increase in the amount was rendered necessary to cover the annual dues to the

Canadian Dental Association which beginning in 1942 are \$4.00 per member.

The annual election of three members to the Board of Directors of the Association resulted in the re-election of the members whose terms expired, namely Dr. A. R. Hurst of Brandon, Dr. C. D. McLeod and Dr. A. E. Proctor both of Winnipeg. The executive officers of the Board for 1942 are President Dr. Garnet Leckie; Vice-president Dr. C. D. McLeod; Registrar and Secretary-treasurer Dr. J. F. Morrison.

Winnipeg Dental Society

The Winnipeg Dental Society held a dinner meeting in the Club Rooms of the Medical Arts Bldg., on January 13. The President Dr. E. J. Robb presided and the guest speaker for the business meeting was a representative of one of the Finance Corporations. The topic of interest was how to know to whom dentists should extend credit and how to collect what is due the dentist after he finds out that the debtor is not a good risk. The formula is have a definite pre-arrangement and hope for the best.

Dental Nurses and Assistants

The Winnipeg dental nurses and assistants met December 5 for their regular monthly dinner meeting, which was held in the Green Room of the St. Regis Hotel. After the business meeting several interesting papers were presented by Miss Juel Grose and Miss L. H. Veal.

Dentists in Municipal Life

The following dentists of Manitoba who are past the age limit to join the Dental Corps are taking an active interest in the municipal affairs of their community:—Dr. F. E. Warriner, Chairman of Supply Committee of Winnipeg School Board, and Chairman of Child Health Service Board, Winnipeg.

Dr. R. L. Myles, Mayor of Birtle.

Dr. E. H. Clarke, Mayor of Minnedosa.

Dr. G. H. Bray, School Trustee, Morden.

Dr. Paul Cleave, Alderman, Neepawa.

Dr. G. H. McDonald, Alderman, Neepawa.

Dr. H. A. Croll, Alderman, Souris, Acting Mayor.

Dr. J. W. Bradley, School Trustee, Virden.

Dr. A. R. Hurst, School Trustee, Brandon.

ONTARIO:

Faculty of Dentistry, University of Toronto

On January 2, 1942, Dr. J. H. Duff commenced his duties as Dental Officer in charge of the dental service at Christie Street Hospital in Toronto. This appointment is for full time service under the Department of Pensions and National Health. The department has seen fit to allow Dr. Duff to retain a contact with the Faculty of Dentistry teaching staff. Dr. K. Harris and Dr. J. Pepper, both of Toronto, have been appointed to carry on some of the duties Dr. Duff has relinquished.

At the beginning of January another member of the staff of the Faculty, Dr. R. L. Twible, enlisted in the Dental Corps. His duties have been taken over by Dr. O. J. Yule.

Dr. Harry Thomson Visits Hespeler

Dr. Harry Thomson, Field Secretary of the Canadian Dental Hygiene Council, was the guest speaker at the dinner meeting of the Hespeler Kinsmen Club, December 9. This Club in co-operation with the Department of Health of Ontario has sponsored a dental clinic for the children of Hespeler.

Dr. Edward J. Ryan, Chicago, Visits Toronto and Hamilton

The Academy of Dentistry, Toronto and the Hamilton Dental Society were privileged to have Dr. Ed. Ryan, Editor of "The Dental Digest" as their guest on January 14 and 15 respectively.

Dr. Ryan led a discussion on practice management which was refreshing. The speaker in a genial, goodnatured manner reminded his hearers of many little details that escape notice, yet from which our patients form favourable or unfavourable impressions of the office and of us. Each dentist present was given a list of questions around which Dr. Ryan made his observations. The questions follow—

1. Do I fail to identify people and to call them by name?
Do I excuse myself for not recognizing people with this lament: "I can't remember names, but I remember faces."
2. Am I less precise in my record and book-keeping systems than I am in my technical procedures?
3. Do I actually use a patient recall system continuously and effectively?

4. Do I frequently suffer from these maladies: Buccal cacoshmia? Hircismus?
5. Do I let my patients make their own diagnoses and prescribe their own treatment?
6. Do I engender fear and apprehension among my patients by any of these acts:
 - A. Do I sometimes practice the technique of the spear carrier and the bubble blower; that is, am I guilty of holding the hypodermic syringe in front of the patient and expelling bubbles from it?
 - B. Am I guilty of thrusting hot, gooey impression materials in the mouth without warning?
 - C. Do I leave my patients to drown in their own spittle while I crack jokes or engage in long telephone conversations?
 - D. Am I a dental exhibitionist: Do I clatter and rattle and make a great display of extraction and surgical instruments before the patient?
7. Do I sometimes arch my eyebrows and shrug my shoulders when looking at a dental restoration, and comment significantly, "Who did *that*?"
Have I forgotten that part of the Oath of Hippocrates which has to do with wagging tongues and scandalmongering among professional men?
8. Do I ride any of the following topics too hard in chairside conversation?
 - (a) politics?
 - (b) religion?
 - (c) personal success? or personal prowess?
 - (d) personal defeatism?
 - (e) boasts about my children?
 - (f) my own hobbies and interests rather than the patients'?
9. Do I ever practice price-cutting to gain acceptance of my service by a patient?
10. Do I sometimes fail to remember that people having the dental experience have *two* fears: the fear of price as well as the fear of pain?
Do I attempt to impress on patients that Dental Neglect Costs More Than Treatment: In Pain; In Time; and in Money?
11. Do I treat my long-time patients as well as I do "new" patients? Are my examinations and treatment-planning as carefully done for "old" patients as for "new" ones?
12. Am I a psychic dentist who looks at the shape of a patient's head or the cut of his clothes and thereupon practices crystal-gazing to determine what evaluation the patient places on his teeth?
13. Am I always careful to tell each patient what his condition is, what can be done about it, and how much each type of service will cost?
14. Do I examine mouths and arrive at a diagnosis without the use of x-rays? Am

I a curb-stone or a pick-and-poke diagnostician?

15. Do I attempt conscientiously to correct medical and health misconceptions?
Do I live up to my title of "doctor" (teacher)?
Do I practice, day in and day out, chair-side patient education?
16. Do I attempt to practice without a dental assistant? Am I my own bookkeeper, receptionist, office--housekeeper, telephone operator—all these at the same time that I am a technician and a dentist?
17. Do I spend my leisure office time productively?
Do I sit in the reception room in shirt sleeves, reading a paper and smoking a black cigar?
Have I fallen too far behind in my reading of the dental and related medical literature to attempt to keep abreast with advances made?
18. Am I ever seen during office hours visiting on street corners, in pool rooms, or even "down the hall"?
Am I a more familiar figure at places of loitering and gambling than at dental meetings, clinics, and study clubs?
19. Am I a shirt-sleeve operator? A saver-of-laundry bills? Do I ever appear before my patients clothed in vulcanite dust, blood stain, and wax speckles?
20. Am I a crying example of dental neglect in the form of clattering full dentures or frank clinical caries or gaping spaces in my mouth? Am I my own worst testimonial of good dental care?
21. Do I give the "little woman" the dental attention that she requires? Are there any cement fillings in my wife's mouth at this moment?
22. Do I shun the care of child patients? Am I aware that children can refer *adults* for treatment?
23. Do I listen to the recitation of complaints patiently? Do I try to out-complain my patients? Do I "whistle while I work," or hum, or otherwise show my boredom with the patient and his recitation of his woes? Do I give patients a lift or do I have a depressing effect on them?
24. Do I apply semantics in my practice? Do I frighten patients and deprecate the profession with expressions, such as:
"You need a dummy."
"I will make you a saddle (a 'skeleton' or a 'synthetic')."
"You have leaking fillings."
"I'll just give you 'a prick with the needle' (or a 'whiff of gas' or 'freeze your gums')."
"Where's my 'bed-bug file' (or 'bayonet' or 'hatchet')?"

"Well, we'll just 'chop' (or 'cut') this away a bit."

Do I disconcert patients by failing to make my utterances heard at all?

Do I startle patients with my shouting?
In other words, how are my dental manners?

25. Do I believe that in dental practice the professional ideal is the prevention of dental disease and the economic ideal is the prevention of misunderstanding?

Have I been giving to Dentistry as much as I have expected from Dentistry?

Research on Dental Caries in the Faculty of Dentistry, University of Toronto

This research has to do with dental caries, erosion, and calculus formation. Every dentist has many times seen these obvious manifestations in the mouth at the neck of the tooth and probably has viewed them as unrelated conditions.

Close observation reveals, however, that in a great many instances there is some intimate relationship between cervical caries, erosion and dental calculus,—and the gingival tissues.

During the last five years many experiments on this problem have been carried out in our research department under the direction of Dr. Harold K. Box, assisted by his research technician, Mr. A. F. Fenton. They have been conducted in close co-operation with the Clinical Department. This research has led us to some definite findings as related to the causation of dental caries. Today there are many theories on dental caries, some of which seem antagonistic to each other and which we believe are but fragments of a more comprehensive concept.

On the basis of this work which is fundamental to the problem of dental caries, various theories may be correlated and harmonized when the subject is viewed from an unbiased and broad approach.

These investigations began, in the first place, on the basis of Miller's theory that in dental caries the initial change in enamel is a decalcification which begins on its surface, the acids which bring this about arising through the process of fermentation. And, secondly, immunity and susceptibility to dental caries were regarded, in the main, as conditions closely associated in some manner with qualities or

changes in the saliva. Susceptibility, in other words, appeared to be closely related to some disturbance of normal salivary function. Immunity appeared to be established by some fundamental protection afforded the teeth by the saliva, against caries.

Beginning with the knowledge that cervical caries is largely a disease of the oral vestibule, or outer mouth, it was found that resting parotid saliva was almost invariably acid in reaction. Considerable work was then undertaken on the problem of liquefying amylase activity of the saliva, and an impairment of this action was frequently shown to be associated with the occurrence of dental caries.

An early laboratory experiment showed that the enamel surface is protected against attack in acid solutions of buffer salts by the presence of sodium oleate. It is now understood that under these conditions free oleic acid was present on the tooth surface. Further experiments showed that higher fatty acids are liberated from cereal starches through the enzymatic action of saliva. It follows that this quality of saliva must vary according to the liquefying amylase activity. When the starch is degraded by bacteria no higher fatty acids are found. Accordingly when this occurs on the tooth surface, no protection against the acid by-products are afforded. Obviously the break-down of sugars by bacteria are not attended by this protective factor.

Fatty acid material as a protective coating for the enamel surface is made available in different ways and in varying amounts. Higher fatty acids were extracted from saliva, both from the cellular debris, and in cell-free secretion. In a study of the mechanism by which oleic acid becomes absorbed on the enamel surface, it was found that this took place when an emulsion is formed with some of the salts found in the saliva. The source of these fatty acids in the saliva, then, is of first importance.

The problem of caries immunity and susceptibility would seem to be closely related to those factors or processes which, on the one hand, facilitate the formation and ensure the stability of protective films on the teeth, and on the other, those which prevent, retard or remove them. The possibility that some relationship exists between these processes and phospholipid metabolism seems to be borne out in a number of ways. Boyd and Drain

have observed that in diabetic children on a high-fat, low-carbohydrate diet, cavity formation was arrested and abundant calculus formation was present. Also, the bearing of a number of general metabolic disturbances on this basis takes on new significance. Among these may be mentioned hypothyroidism, hyperthyroidism, chronic sepsis, and repeated attacks of fever. Puberty, pregnancy and certain psychogenic states also may have a relationship. MacGregor and Simpson of Toronto have observed that children with celiac disease, on a special diet, show marked immunity to dental caries and rapid calculus formation. The clinical dental findings thus resemble those of the diabetic children on the high-fat low-carbohydrate diet.

Investigations are now under way on many phases of this complicated problem and it is expected that further announcements will be made in the near future on the developments of this important research on dental caries.

ARNOLD D. MASON.

Dental Nurses' Alumnae Association

The monthly meeting of the Dental Nurses' Alumnae Association was held at the Women's Union, 79 St. George St., Toronto, on January 13, with the President, Miss Anna Lindsay, in the chair.

Final arrangements were made for the annual bridge to take place at the I.O.D.E. Headquarters on February 4. The proceeds will go to the Alumnae Fund for a Mobile Dental Unit for the Canadian Dental Corps.

Dr. Wallace J. Graham gave an interesting talk illustrated by slides on "Rheumatism and its Relation to Dental Disease." Dr. Graham is a graduate in Dentistry and Medicine of the University of Toronto. He was a fellow in Medicine and after spending several years in research work in focal infection at the Toronto General Hospital is now on the staff there.

The speaker was introduced by the President and thanked by Miss Mildred Brown.

MARIAN JENNINGS,

Assistant Corresponding Secretary.

Ontario Dental Nurses' and Assistants' Association

BRANTFORD DISTRICT CHAPTER: Alta Simon, President of the Brantford District Chapter,

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presided at a dinner meeting which was held at the Hollywood Restaurant on Monday evening, November 24.

The programs for the coming meetings were arranged, and plans were made to entertain the members of the Hamilton Chapter in January.

An excellent report was read by the War Service Convener, and Irene Douglas was appointed Press Reporter.

MARION GREENSIDES, *Secretary*.

ESSEX AND KENT COUNTY CHAPTER: The members of the Essex and Kent County Chapter met in room 308 of the Canada Building on Monday evening, January 5.

The sum of \$20. was voted to the Provincial War Fund. Further plans were made for the annual Valentine Bridge which will be held in the C. H. Smith Auditorium on Thursday evening, February 12 with Irene McNair and Dorothy Scott as joint hostesses.

The meeting was adjourned after a lengthy business session.

WINIFRED GRIER, *Secretary*.

HAMILTON CHAPTER: Dr. John A. Bothwell of Toronto spoke to the members of the Hamilton Chapter at their dinner meeting which was held in the Wentworth Arms on Thursday, January 15. "Personnel and Personality in the Dental Office" was the subject of Dr. Bothwell's fine address.

The Convener of the "Mile of Nickles" drive reported that the sum of \$40. had been realized. This money will be turned over to the Provincial War Fund.

GERTRUDE KIDNER, *Secretary*.

KITCHENER DISTRICT CHAPTER: A Hard Times party was sponsored by the members of the Kitchener District Chapter on Wednesday evening, December 3. The party was held at the home of Mrs. Gordon Oberhaltzer, President. Mrs. Paul Diesbourg was the assisting hostess.

After a brief business meeting, games were played and the costumes judged. Ruth Rotters was awarded first prize.

RUTH CLARK, *Secretary*.

LONDON DISTRICT CHAPTER: On Monday, January 5, the members of the London Chapter

held a Theatre party. Later in the evening, Miss Jane Wells entertained the group at the office of her employer, Dr. S. M. Kennedy.

A gift was presented to the Immediate Past President, Madeline McKay, whose marriage will take place in January.

RUTH WALKER, *Secretary*.

NIAGARA DISTRICT CHAPTER: Mary French Thompson was hostess to the members of the Niagara District Chapter at her home in Niagara Falls on Monday evening, January 5.

After the reading of the minutes and the correspondence, the members talked of sending a representative to the executive meeting which is to be held in Kitchener next month. It was decided that each girl would contribute \$1. toward the Provincial War Fund. Mrs. C. Down won the war saving stamp in contest.

The next meeting will be held on Monday evening, February 2, at the home of Miss McFarlane in St. Catharines.

MADLINE COOMBS, *Secretary*.

SARNIA DISTRICT CHAPTER: The President of the O.D.N. & A.A., Tomye Turner, and the Immediate Past President, Ferna Cook, were guests at a dinner meeting of the Sarnia District Chapter which was held at Dell's Restaurant on Monday evening, January 5.

The business meeting was presided over by the Vice-President, Aileen Palmer.

Mrs. Turner talked to the members about the coming Provincial convention and encouraged them to participate in the program. She also gave an interesting résumé of her recent trip to the American Dental Assistant's meeting in Houston, Texas.

HELEN WYNNE, *Secretary*.

Dr. Andrew J. McDonagh

News of the death of Dr. McDonagh on February 10 comes just as our Journal goes to press. Members of our profession throughout Canada, perhaps more particularly in Ontario where he was known and loved best, will learn with much regret and sorrow of the passing of a great and kindly gentleman.

Further tribute will appear in March issue.

NOVA SCOTIA:

Halifax Dental Society

Two sessions of the Halifax Dental Society have taken place since the last report, with the President, Doctor W. H. H. Beckwith, in the chair. On November 13 the members met as usual for a seven o'clock dinner in a private dining room in the Nova Scotian hotel. The attendance was large and it was pleasing to note the interest the members of the Canadian Dental Corps, stationed in Halifax, are taking in these monthly meetings. It is needless to say how glad we are to welcome them.

After the dinner had been dispatched and the minutes read and approved, the President introduced Doctor W. C. Oxner as the speaker of the evening. Dr. Oxner very ably presented, with the assistance of a series of models, a pin veneer which he thought had several advantages over the usual type. A vigorous discussion followed and, of course, a vote of thanks was presented to the speaker.

December 11 saw the last meeting of 1941. The attendance was so large that extra tables had to be brought in before dinner could be served. After the minutes were disposed of the President introduced the speaker, Dr. M. K. McPhail, Professor of Pharmacology at Dalhousie University. Dr. McPhail has spoken to the Dental Society before and all of those who had heard him naturally looked forward to his re-appearance. He chose as the subject of his address "The Present Status of the Sulphonamide Drugs" and it would be difficult to select a subject more timely. Dr. McPhail speaks without notes and leaves no question in anyone's mind with regard to his grasp of very difficult material. The discussion which followed was animated and extremely instructive. Since the meeting Dr. McPhail has been prevailed on to put the address in shape for publication in the Journal.

Colonel Frank Lott, who had just arrived in Halifax from Debert, gave a brief talk on the progress made by the Dental Corps, since we last had the privilege of welcoming him.

It is with regret that we announce the recent death of Doctor George H. Fluck who, at the last meeting of the Nova Scotia Dental Association, was made its first honorary member after fifty years of practice.

BRITISH COLUMBIA:

Vancouver Dental Society

The first dinner meeting for 1942 of the Vancouver Dental Society was held in Salon A, the Hotel Vancouver on Tuesday evening, January 6.

This meeting started the New Year well with a good attendance and a fine speaker. It was particularly fitting at this time to have a man from our neighbouring republic to the south speak to us. The head table was backed by the Union Jack, Stars and Stripes and Canadian Ensign. Dr. Wallace C. Shearer of Portland, Oregon, the guest speaker, very courteously proposed an impromptu toast to "The three Flags, we hope they always stand together". He spoke briefly of the lesson of Pearl Harbour, and of Churchill "a real man" and quoted the latter's wish expressed in the speech before the U.S. Congress that our two nations may walk together in "Majesty, Justice and Peace".

Dr. Shearer's scientific presentation was divided into two parts:

- (1) Moving pictures demonstrating Surgery in the Oral Cavity.
- (2) Lantern slides showing the Detailed technique.

Both of these methods of presentation offered much in the nature of review and new thought and his visit was much appreciated by the members of the Society.

ALBERTA:

Dr. Rowlett's Visit

The recent visit of Dr. Rowlett of Leicester, England, to Edmonton and Calgary, marks the first occasion on which an English dentist has been a guest speaker to Alberta dental societies.

Dr. Rowlett is a past president of the British Dental Association. He is visiting Canada and the United States as a representative of the British Health Ministry, to study dental conditions with a view to planning for the greater demands for dental services and the changing status of dentistry which must surely come in the post war period. In his able address he pointed out the need for Canadian provincial executives to prepare for the difficulties and changes of this period.

The writer believes that the re-establishment

of the large number enlisted in the Canadian Dental Corps is one of the major problems. The rapidly growing awareness on the part of peoples and governments of the importance of dental services, makes government direction of our profession a strong probability. The inadequate number of dentists to provide a dental health service to the public in general is now being brought most forcibly to their

attention.

It behooves us in this province to support our executive in preparing for these problems. It is also an urgent duty to give large support to the Canadian Dental Association, and to adequately finance it. Canadian Dentistry should speak with one voice, and should be well prepared to co-operate in the coming extension of dental health services.

GENERAL NEWS

Dominion Dental Council Examinations

This year, due to the fact that the Colleges are graduating their students at different times, we are holding two sets of examinations.

In Toronto we are holding our examination from April 6-11. Class A. candidates must have their fees in the Secretary's office not later than March 6, otherwise the fee will be returned. Class D. candidates should have their fees in on, or before, February 15.

In Edmonton and Halifax we are holding our examination from May 4-9. Class A. candidates must have their fees in the Secretary's office not later than April 6, otherwise the fee will be returned. Class D. candidates should have their fees in on, or before, February 15.

A. J. BRETT, *Regina, Saskatchewan.*

Neglected Category

One of the great problems facing public health today is defined as: "proper care for facial cripples," says Dr. Herbert K. Cooper, of Pennsylvania State Hospital for Crippled Children.

He refers to those with facial deformities arising from malformed teeth, ill-formed jaws, cleft palate and defective speech, of which there are estimated to be about 250,000 in this country.—*Hospital Topics & Buyer*, Nov., 1941; *per A.D.A. Release.*

The A.D.A. in Houston

The increase in dues to \$6.00 established last year did not affect membership, for the national association reported that it had the largest number of members in its history. This is sound evidence that an overwhelming majority of dentists in this country have reached a definite point of conviction on the

value of organized dentistry to the individual dentist. The increase in dues also enabled the American Dental Association to meet the many demands which an enlarging program and the necessities of national preparedness impose. Without these additional funds, the work of organized dentistry would have been hampered at a time when such restriction would have been dangerous if not actually destructive.—*Ill. D. Jrl.*, 11/41, Vol. 10, No. 11; *per A.D.A. Release.*

Flash Photography

The newer developments of flash photography have been made to reveal some of the results of a sneeze. Drs. Bourdillon and Lidwell have made a report, published in full in *The Lancet*, and well illustrated, demonstrating the great harm that may result in spreading infection by the uncontrolled sneeze. A single sneeze may project 19,000 droplets into the air, where many may remain suspended for more than a quarter of an hour. A large handkerchief carefully used prevents the scattering of these droplets, and a simple impermeable mask collects the vast majority of them. The use of the hand for checking such scattering is very inefficient.—*Dental Record.*

Dental Hygiene Institute

The Board of Directors of the Chicago Dental Society has approved an appropriation of six thousand dollars for the development of an organization to disseminate dental health information and to create a desire for dental service that at present the public needs but does not seem to want. A sum equal to that provided by the Chicago Dental Society is to be secured by contributions from sources outside organized dentistry and from the dues

of \$5.00 which will be charged the members of the Society who wish to join the Institute.

One of the features of the plan is the preparation and presentation to lay audiences of material designed to impress the public forcefully with its need for dental service, and to make that service so attractive that it will be wanted. The development of this phase of the program is to be in charge of a full time director, who is thoroughly trained in psychology and promotional techniques, who speaks the layman's language and has the layman's point of view. It will be his job to tell in a most effective way what dentistry can do for health and appearance. Consequently it is believed that the Director of the Dental Hygiene Institute, equipped with educational material prepared under his direction by professional artists, actors and writers, with adequate supervision by the Chicago Dental Society, can supply a much needed public relations service.

The Institute also proposes to revive the Industrial Diagnostic Service. This service proved to be a definite stimulation for securing dental attention among industrial workers, but its tremendous potentialities have not been realized because of inadequate financial support. — *Excerpts from Editorial, Fortnightly Dental Review of Chicago D. Soc., Dec. 15, 1941.*

New Army Medical Library and Museum

Congress has authorized the War Department to purchase for \$1,000,000 a site near the Folger Shakespearean Library for a new Army Medical Library and Museum to cost \$3,750,000. Thus begins the final stage in the culmination of a project for which American medicine and dentistry have been active for a good many years. Even approximate estimates calculate that the material now available in the Army Medical Library and Museum is worth at least \$25,000,000 and could not possibly be replaced even at that price.—*N.Y. Jour. of D.*

Survey Shows Only 4 Percent in Low-Income Farm Families in Prime Health

Since 1936, groups of Federal Security Administration borrowers have been co-operating with State and county medical societies to ob-

tain physicians' services and hospital care at prices based on ability to pay. These families pool and prepay annual fees, usually ranging from \$15 to \$35, for general-practitioner care, obstetrical care, emergency surgical care, limited hospitalization, and ordinary drugs. Emergency dental care is sometimes included, or is provided in separate plans.

"As this medical-care program grew—it now serves more than half a million people in about 900 counties of 37 States—we wanted to know more about the health needs of low-income farm families," Dr. Williams said. "State medical colleges co-operated in obtaining a group of specialists and nurses to give complete physical examinations to all Federal Security Administration borrower families in 21 typical counties throughout the country."

First on the list of physical defects found were bad teeth. Nearly 7 out of every 10 persons over 5 years of age had decayed permanent teeth. The proportion among white persons between 15 and 30 years was 85 per cent. Decayed teeth were counted as 1 defect, regardless of the number involved.

Of the 9,776 persons in white families, 55.3 per cent had defective tonsils. Among wives, 41.6 per cent had second or third-degree injuries resulting from childbearing. More than 40 per cent of the wives and 35 per cent of the husbands had at least moderately defective vision in both eyes. Various types of hernia were found in 1 out of every 12 heads of families.

Thirteen per cent of white husbands and wives had abnormal blood pressure. Seventy-nine in every 1,000 white persons had impaired hearing in 1 ear, and 29 had middle-ear disease.

Clinical diagnoses revealed that one child out of every 12 under 15 years of age suffered from malnutrition; 1 out of every 17 had rickets or showed after-effects of rickets. . .

Pointing out that "many defects were serious enough to cause partial or total disability," Doctor Williams said Farm Security Administration was helping families to correct the most urgent conditions. "Although medical care now available will go far toward solving the problem," he added, "this alone is not enough. There must be more emphasis on nutrition and health education, more

public-health work, more hospitals and clinics, and more doctors and dentists in rural areas."—*U.S. Dept of Agriculture, Dec. 4, 1941; per A.D.A. Release.*

The Greater New York Dental Meeting

The Greater New York Dental Meeting, held during the first week of December, emphasized more than ever the essential difference between dental and medical practice. The practice of dentistry, if one is to judge by the large number of over one hundred clinics presented, and by the overwhelming attendance which they attracted, requires a degree of perfection of technical skill altogether unknown in medical practice. True the basic scientific

aspects of dentistry came in for their due share of discussion and attention. However, it was the "How to—" phase which was emphasized in every respect.

In the final analysis, the greater part of the practice of dentistry, even that of a preventive nature, entails the employment of instruments and materials which the dentist must be proficient in using if his patients are to be benefited by his ministrations. That this is so is attested by the fact that the meeting closed with a registration of over 15,000 in attendance. "You have to see how a thing is done; it is not sufficient to read about it," is the way one dentist expressed it.—*From editorial in N.Y. Jour. of Dentistry, Jan., 1942.*

IN MEMORIAM

J. D. MacLachlan of Carleton Place, Ontario, aged forty-five died November 18. He enlisted during the last war and was in the C.A.D.C. Upon his return he became a member of the Sergeants' class and was graduated from the Faculty of Dentistry, University of Toronto in 1923.

He practised for a time in Vankleek Hill and then at Metcalfe, after which he went to Carleton Place where he practised for about fifteen years. He had been in his office during the day and had just arrived home in the evening when he suffered a severe heart attack and died before the next morning.

Dr. MacLachlan is survived by his widow.

•

George H. Fluck, of Halifax, Nova Scotia, aged 80, died December 17.

Dr. Fluck took an active interest in sport. In his younger days he was prominent as a cricketer and in later years was an active supporter of rowing. He was a charter member of the North West Arm Rowing Club. He was a great admirer of the beauties of the North West Arm and many years ago established a home at Marlborough Woods, on the shore of the Arm, where he has since resided.

Dr. Fluck is survived by two sons.

Harry Wesley Matthews of Vancouver, B.C., aged 44, died January 7. He was graduated from North Western University in 1921. He practised his profession for several years in Spokane, Wash., before moving to Vancouver. He was a member of the Knights Templar and the Shrine.

Dr. Matthews is survived by his widow, one son, six sisters and two brothers.

■

William Ayton Leggo of Ottawa, Ontario, aged 81, died January 3. He was graduated from the University of Toronto in 1883 and practised until 1928 when he retired.

He attended Christ Church Cathedral and was the oldest life member of Dalhousie Lodge, A.F. & A.M. He was a member of the Connaught rifle team and also took a keen interest in curling and golf.

Dr. Leggo is survived by one daughter, one son, a brother and sister, and five grandchildren.

•

Charles Augustus Powers, of Vancouver, British Columbia, aged 72, died December 14.

He was born in Port Hope, Ontario, came west to Brandon in 1881 and practised there for 45 years. Five years ago he moved to Vancouver.

Dr. Powers is survived by his widow, a sister and two brothers.

. . . SECTION FRANÇAISE . . .

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Phlegmon Gangréneux de la Joue Propagé à la Fosse Temporale*

par PIERRE HENNION
(Paris)

Observation de la consultation de stomatologie de l'hôpital Laënnec
Service du Dr DARCISSAC

Nous avons observé un phlegmon gangréneux de la joue propagé à la fosse temporale. Voici l'observation de ce malade:

Le 5 octobre 1936, nous étions appelé à examiner M. B..., âgé de 59 ans, entré deux jours plus tôt dans le service de chirurgie de l'hôpital Laënnec.

D'emblée, nous sommes frappés par la déformation de sa face. Un œdème très volumineux infiltre la joue du côté gauche, déforme la lèvre supérieure, éverse la lèvre inférieure, boursouffle les paupières dont l'ouverture est impossible, et remontant jusqu'à la région frontale, s'étend du côté opposé où la paupière supérieure est également infiltrée. Cet œdème mou, blafard, parcouru de veines dilatées, respecte les régions zygomatiques et temporales. Les ganglions sous-maxillaires sont enflammés et douloureux.

L'examen endobuccal est facile, car le trismus est peu serré. En regard de la dent de 6 ans gauche, une perte de substance large comme une pièce d'un franc perfore la muqueuse jugale, à 1 centimètre au-dessus du cul-de-sac vestibulaire. Elle laisse s'écouler un pus verdâtre, extrêmement fétide, très abondant, mêlé de débris cellulaires sphacelés et de bulles de gaz.

L'examen au stylet montre que le décollement atteint les insertions hautes du buccinateur et s'étend en arrière jusqu'au bord antérieur de la branche montante.

* Communication à la Société de Stomatologie de Paris, séance du 17 janvier 1939

Cette cellulite a succédé à des accidents infectieux d'origine dentaire. Les première et deuxième molaires inférieures gauches, en effet, sont profondément cariées et mobiles. Leurs racines sont très dénudées. Le sillon vestibulaire est rouge, empâté, douloureux à leur niveau.

Huit jours auparavant, le malade a ressenti de vives douleurs à l'angle gauche de la mandibule. L'apparition du trismus, de la fluxion, de la dysphagie, la température à 39°, ont nécessité l'hospitalisation.

Il s'agit sans aucun doute d'une poussée aiguë d'ostéopériostite sur des foyers de monoarthrite apicale chronique.

Malgré l'importance des signes locaux, l'état général est bien conservé. Sans doute, la température est-elle à 40°, mais le pouls à 120 est ample, bien frappé. La respiration est normale. Il n'y a pas d'oligurie. Le malade calme, lucide, sans agitation ni torpeur, répond parfaitement aux questions.

Il nous apprend que bien portant jusqu'à l'année précédente, il fut hospitalisé quinze mois plus tôt, le 24 juillet 1935, à l'hôpital Saint-Antoine pour un abcès siégeant au gros orteil du pied gauche. L'examen des urines révéla une glycosurie légère. L'abcès fut incisé, le malade mis au régime. Il sortit guéri le 19 octobre 1935.

Nouvel abcès plus volumineux, au même point, deux mois plus tard. Le malade est hospitalisé à l'hôpital de Vaugirard. Les urines contiennent des traces de sucre. M. B... reçoit de l'insuline, du propidon. On restreint les hydrates de carbone. L'abcès est incisé et la guérison est complète fin janvier 1936.

Depuis cette époque, notre malade a suivi son régime et bien que fatigué par ces deux abcès successifs, s'est assez bien porté jusqu'aux accidents infectieux d'origine dentaire qui l'ont de nouveau conduit à l'hôpital. Ajoutons qu'il se défend de toute habitude d'intempérance.

L'examen des urines nous montre des traces d'albumine, mais l'absence de sucre. Nous demandons alors un Wassermann, la recherche du taux de la glycémie et sans attendre le résultat de celle-ci, l'injection de 30 unités d'insuline. Le malade a reçu du propidon le jour de son admission et une deuxième injection le matin même. Nous injectons en plus 20 centimètres cubes de sérum antigangréneux.

La collection purulente se draine bien. Nous nous contentons, après un grand lavage au bœck, de placer dans la poche un drain rigide, perforé, que nous fixons à la peau par une bande de diachylon. Par ce drain, on injecte toutes les deux heures du Dakin. Enfin, le malade est mis au régime lacto-végétarien.

Le lendemain, l'œdème s'est atténué, la suppuration a diminué, l'état général se maintient. La glycémie est peu élevée à 1 gr. 35. Le Wassermann est négatif.

L'amélioration se poursuit les jours suivants. La suppuration diminue visiblement. Le 9 octobre, on extrait les deux molaires inférieures gauches. La radiographie a confirmé les lésions d'ostéite chronique raréfiantes qui nécessitent un curetage soigneux.

Une semaine après l'entrée du malade, la température tombe à 37°. L'œdème facial est presque entièrement résorbé. L'ouverture des paupières se fait aisément. La suppuration est presque tarie.

Cependant, huit jours après l'entrée du malade, la température tend à remonter sans aggravation de l'état général. Le 14 octobre, onzième jour de l'hospitalisation, elle atteint 39°.

Nous sommes frappés, le lendemain matin, par l'aspect du malade. Un volumineux œdème déforme la région temporale du côté gauche. La tuméfaction s'étend de l'angle orbitaire externe à la mastoïde. Elle est strictement localisée à la fosse temporale, dont les plans superficiels sont soulevés sans que l'œdème en déborde les limites; les contours de la fosse temporale sont dessinés par la tuméfaction. La fluctuation est franche à la palpation. Sans aucun doute, l'abcès putride de la loge jugale s'est propagé à la fosse temporale.

Immédiatement, sous anesthésie générale, nous incisons la fosse temporale depuis l'apophyse orbitaire du malaire jusqu'à la mastoïde. Un flot de pus gazeux, verdâtre, très fétide s'écoule, mêlé de débris sphacelés. On ligature l'artère temporale superficielle et on écarte les lèvres de la plaie. L'aponévrose temporale gangrenée s'élimine sous forme de longs filaments sphacéliques comparables à de l'étaupe. La suppuration est surtout abondante dans la gouttière rétro-malaire où glisse le tendon du temporal.

Mais le muscle lui-même est indemne. Partout, il a conservé sa couleur rouge, chair musculaire. On ne voit en aucun point de coloration grisâtre, sphacélique. Il n'est pas soulevé, tuméfié, et certainement il n'existe pas de collection profonde.

Après la toilette de la plaie, on couche sur le muscle un drain perforé qui descend en avant dans la gouttière rétro-malaire et dont l'autre extrémité sort du pansement. Par ce drain, on injectera toutes les deux heures du Dakin.

Enfin, on continue les injections d'insuline, de sérum antigangréneux et d'huile camphrée.

Dès le lendemain, la température tombe à 37°6. La suppuration est moins abondante. L'état général se maintient sans aucun symptôme de toxhémie.

L'amélioration se poursuit au cours des semaines suivantes. La suppuration du foyer jugal et de la fosse temporale diminue peu à peu.

Le 1^{er} décembre, on suture le cuir chevelu. La perte de substance de la muqueuse jugale se cicatrice. Mais quelques jours plus tard, une petite collection vient bomber à la peau, en avant du buccinateur, dans la région du déversoir de Chompret et L'hirondel. Incisée le 19 décembre, elle donne issue à un liquide séropurulent, louche, non fétide, peu abondant. Définitivement guéri, le malade est envoyé le 22 décembre en convalescence au Vésinet.

Cette observation nous a paru intéressante à plusieurs titres.

Soulignons d'abord que les phlegmons gangréneux circonscrits de la fosse temporale sont plus rares que les phlegmons gangréneux diffus. Longuet, dans la thèse récente qu'il a consacrée aux phlegmons profonds de la face, n'a pu en réunir que 16 observations.

Du point de vue clinique, il est classique d'opposer le phlegmon gangréneux diffus, où aux désordres locaux rapidement extensifs s'ajoutent les signes d'une intoxication massive et brutale de l'organisme, au phlegmon gangréneux circonscrit, véritable abcès putride bien collecté, sans signes de tox- infection grave. Chez notre malade, en effet, l'évolution de ces cellulites gangréneuses fut bénigne. Le pronostic vital ne s'est jamais posé, à aucun moment l'état général ne fut inquiétant.

Est-ce un terrain déficient, une tare organique qui peuvent expliquer l'évolution plus ou moins grave de ces phlegmons de la face? Pour nombre d'auteurs cependant, les formes graves diffuses se verraient surtout chez des individus jeunes, robustes, bien portants, sans lésions organiques. Evidemment, le rôle du terrain chez notre malade est indéniable, mais s'il était primordial il nous semble que chez cet homme, âgé, fatigué par deux infections suppurées successives survenues quelques mois auparavant, de plus hyperglycémique, on aurait dû voir évoluer non pas un abcès putride mais une infection gangréneuse hypertonique.

Sans doute est-ce dans la virulence plus ou moins élevée de la flore microbienne, dans l'association des anaérobies entre eux ou avec le streptocoque, qu'il faut chercher l'explication de la gravité ou de la bénignité des phlegmons gangréneux d'origine dentaire. "Affaire de races microbiennes, affaire de nombre, affaire d'association", écrivent Charles Ruppe, Lattès et Cauhépé qui ajoutent: "Le même microbe peut rester à l'état de saprophyte, engendrer des abcès putrides sans gravité, ou frapper à mort un organisme avec une brutalité déconcertante." Il ne nous a pas été possible, chez notre malade, de connaître les microbes en cause car, malheureusement, nous n'avons pu obtenir l'examen bactériologique du pus.

Du point de vue anatomopathologique, il faut souligner la propagation très rare de l'infection d'origine dentaire à la fosse temporale par la voie de la loge jugale. Le plus souvent, quand l'infection part d'une dent inférieure, elle chemine par voie sous-muqueuse et sous-périostée, remonte le long de la branche montante, véritable phlegmon disséquant, pour atteindre la fosse ptérygo-maxillaire puis gagner la loge temporale.

Il n'existait pas, d'autre part, chez notre malade d'abcès en bissac, signalés autrefois par Pouillaude, les deux collections communiquant alors sous le zygoma par la gouttière rétromalaire.

On sait, en effet, que la loge jugale, la fosse ptérygo-maxillaire, la loge temporale communiquent entre elles au niveau de la boule graisseuse de Bichat, véritable carrefour cellulaire décrit par Dieulafoy, sous le nom de couloir sous-massetérin.

Cette intercommunication explique l'extension rapide des infections gangréneuses de la face et, dans le cas de notre malade, la propagation du phlegmon jugal à la fosse temporale. Enfin, du point de vue chirurgical elle commande l'ouverture large et précoce de ces espaces cellulaires, seule capable d'assurer la guérison.

Deux Observations de Phlegmon Diffusé Céphalique*

par MM. BELIARD, L. LEBOURG et M^{me} S. CERNEA
(Paris)

Il nous a paru intéressant de vous apporter deux observations de phlegmons diffusés suite d'ostéo-phlegmon des molaires inférieures.

Ces 2 cas, mortels, confirment la notion de gravité de certaines complications celluluses, malgré l'institution d'un traitement local réalisant un drainage aussi large que possible, et en dépit d'un traitement général séro-thérapique intense.

Dans un de ces cas, nous avons pu faire postmortem des constatations anatomopathologiques intéressantes, mettant en évidence le chemin parcouru par l'infection et l'importance des lésions.

Observation n°1.— Mme S..., 29 ans, se présente le 11 mars 1938 à la consultation de stomatologie de l'Hôtel-Dieu. Quinze jours auparavant avait débuté un ostéophlegmon de la dent de sagesse inférieure gauche ayant déterminé une volumineuse tuméfaction qui, de la région de l'angle, avait gagné peu à peu toute l'hémiface.

Ce qui frappait d'emblée chez cette femme c'était une énorme tuméfaction de la région temporale soulevant le cuir chevelu jusque sur le pariétal gauche. La peau, tendue, était violacée et la palpation donnait une sensation de fluctuation. Les régions parotidienne, jugale, angulaire sous-jacentes étaient également tuméfiées; les paupières gonflées d'œdème, étaient à demi fermées.

Un trismus serré gêne l'examen endo-buccal. D'emblée on note une septicité très marquée, la présence de nombreuses racines, de dépôts tartriques épais, témoignant du manque total et habituel d'hygiène buccale.

La région vestibulaire gauche, au niveau des molaires, est comblée par une tuméfaction qui s'étend à toute la face interne de la branche montante. La dent de sagesse, profondément cariée, est mobile, enchâssée dans la muqueuse et environnée de pus. L'extraction en est pratiquée facilement. Puis la tuméfaction vestibulaire est largement incisée, l'ouverture est faite parallèlement au bord antérieur de la branche montante et sur toute sa hauteur, ce qui permet de décoller les fibres antérieures du masséter.

Une incision horizontale de la tuméfaction temporale, juste au-dessus de l'arcade zygomatique permet, non pas de libérer une collection purulente, comme le laissait espérer la zone fluctuante perçue à ce niveau, mais de découvrir le muscle temporal boursoufflé, violacé, verdâtre et sphacélé par endroits, il est incisé jusqu'à l'os, on ne fait sordre qu'une sérosité louche et fétide. À l'aide d'une sonde cannelée, on fait communiquer les deux incisions temporale et endo-buccale. Des lavages antiseptiques sont pratiqués par cette voie, on laisse en place de gros drains.

La malade est hospitalisée. Sa température est de 39°. L'examen de l'urine ne révèle ni sucre, ni albumine. Elle reçoit une injection de 100 centimètres cubes de sérum (anti-infectieux, antigangréneux, antistreptococcique, antidiphthérique). Cette injection est renouvelée. Le lendemain, l'état général est stationnaire, mais la tuméfaction s'étend dans la région frontale, ce qui détermine une nouvelle incision susorbitaire. Deux jours après, la région sous-orbitaire est également incisée et drainée.

Enfin, sept jours après la première intervention, on pratique encore deux autres incisions: l'une dans l'espace interptérygoidien, l'autre dans la région sous-angulomaxillaire.

Aucune amélioration ne se produit, la température oscille entre 39°5 et 40°. La mort survient le dixième jour.

Dans cette observation, nous voyons évoluer, avec sa physionomie assez typique, un phlegmon céphalique diffusé.

Le premier terme des accidents a été une monoarthrite apicale de la dent de sagesse inférieure, bientôt suivie d'un ostéo-phlegmon, chez une femme en état de septicité buccale manifeste. La présence des foyers infectieux multiples et chroniques,

* Communication à la Société de Stomatologie de Paris, séance du 21 février 1939.

que nous avons constatés n'est pas sans créer un terrain remarquablement propice à la diffusion des germes virulents. L'infection osseuse et pérимандibulaire, cantonnée tout d'abord au voisinage de la dent de sagesse, a progressé en suivant les espaces cellulaires les plus accessibles, par la face externe de la branche montante. Empruntant la gaine du masséter, elle a gagné la fosse temporale et les régions voisines, tandis qu'en dedans elle atteignait la fosse ptérygo-maxillaire.

Dans notre deuxième observation le cheminement de l'infection a été tout autre, ainsi que nous avons pu le constater à l'autopsie.

Le 4 décembre 1937, M. Th..., 56 ans, vient consulter pour un ostéo-phlegmon dû à la molaire de 6 ans inférieure gauche, dont il souffre depuis quatre jours. Il présente, en effet, une tuméfaction vestibulaire qui est incisée et qui donne issue à une petite quantité de pus, l'extraction de la dent causale est pratiquée sous anesthésie tronculaire à l'épine de Spix.

Cependant 2 jours après le malade revient se plaignant de douleurs irradiant vers l'oreille et d'une légère dysphagie. L'examen, gêné par le trismus, montre le pilier antérieur du côté gauche rouge et tuméfié. Des soins locaux et 2 injections intramusculaires d'électrargol n'empêchent pas une accentuation des symptômes les jours suivants.

Six jours après l'extraction de la dent, les douleurs, irradiant vers la tempe et l'oreille, la dysphagie, sont très marquées, empêchant le sommeil. Le trismus est de plus en plus serré. Le malade est pâle, fatigué, abattu, sa température oscille entre 38° et 38°5 le soir. La région mandibulaire est tuméfiée, surtout au niveau de l'angle.

Le pilier antérieur, difficile à examiner est très rouge et très tendu. Le 13 décembre, il est incisé et on évacue ainsi une collection de pus chocolat peu abondant et très fétide.

Cependant, l'état général s'aggrave, la température atteint 39°, le malade est très abattu, prostré même. La fluxion a gagné la région parotidienne et la région temporale; le 14 décembre apparaît une paralysie faciale gauche de type périphérique; une torpeur profonde envahit le malade qui se plaignait auparavant de violentes céphalées. Il n'y a ni sucre, ni albumine dans l'urine.

L'admission en salle est décidée et le même jour la fosse temporale et la région sous-maxillaire sont incisées et drainées. D'autre part, 100 centimètres cubes de sérum antigangréneux, antistreptococcique, antidiphthérique sont injectés. Le lendemain 15 décembre, on note une légère amélioration, mais le 16 la mort survient au milieu de phénomènes méningés; le dosage de l'urée sanguine fait le même jour indique 1 gr. 20 d'urée par litre.

L'autopsie a mis en évidence: une ostéite de la base du crâne intéressant toute la portion gauche du sphénoïde corps et ailes, réduite en une véritable bouillie noirâtre. L'infection avait manifestement gagné les méninges et tout l'hémisphère gauche.

Ainsi, dans cette observation, l'infection a gagné directement de la fosse ptérygo-maxillaire la base du crâne, la trépanant en quelque sorte, pour ensemençer ensuite les méninges. C'est cette méningite suraiguë qui a emporté le malade sans qu'aient eu le temps de se constituer des lésions vasculaires, telles ces thrombo-phlébites, qui viennent fréquemment mettre un terme à ces phlegmons céphaliques.

Accident Mortel d'Evolution d'une Dent de Sagesse Inférieure*

par Mme ODETTE GUILLIOU

Assistante du Service de stomatologie de l'Hôpital Henri-Roussel.

Il est heureusement rare d'observer un cas de mort d'origine nettement dentaire; ayant eu l'occasion d'observer un cas de ce genre chez un malade interné à l'Asile Ste-Anne, nous croyons devoir vous le communiquer.

Le 30 mars 1938, nous fûmes appelée auprès de ce malade pour une consultation. A l'examen externe de la face, on est immédiatement frappé par l'altération des

* Soc. Odontologique de France: Séance du 25 octobre 1938.

traits et l'atteinte de l'état général, par l'existence d'une tuméfaction angulo-maxillaire débordant en arrière vers le lobule de l'oreille localisant aussitôt la recherche, par la fétidité de l'haleine, fétidité assez marquée pour évoquer la participation probable d'anaérobies: l'idée venait donc aussitôt d'un accident dentaire grave chez un cachectique. Le malade souffre depuis quatre jours, et au début l'interne du service, pensait soit à une parotidite infectieuse, soit aux oreillons.

A la palpation, les ganglions cervicaux sont nettement perceptibles, sensibles, la palpation de la région parotidienne gauche réveille des douleurs qui irradient vers la région temporo-maxillaire et qui arrachent des gémissements au malade.

Dysphagie douloureuse, refus de faire tout mouvement de déglutition. La température n'est pas en rapport avec l'état du malade, puisqu'elle n'est que de $37^{\circ}2$.

L'examen endobuccal est facilité par une assez large ouverture de la cavité buccale; ouverture fixe d'ailleurs, comme si la contracture des masticateurs se heurtait à une tuméfaction profonde empêchant le rapprochement mécanique des arcades dentaires.

On note la présence de mucosités noirâtres recouvrant toute la cavité buccale ainsi que le voile du palais et les piliers.

Nous faisons nettoyer à l'eau bouillie et au Dakin la cavité encombrée de saletés. Nous constatons la présence de nombreuses racines au maxillaire supérieur, et au maxillaire inférieur une dent de sagesse gauche en évolution.

Entre cette dent et le cul-de-sac qu'elle forme avec la branche montante, l'on constate une tuméfaction abcédée.

La muqueuse est très gonflée et rouge ainsi que les joues. La langue est indurée et en la soulevant on constate qu'au niveau de l'ouverture du canal de Warthon apparaît du pus. Du pus sourd également au niveau du voile, des piliers, des amygdales et de l'ouverture du canal de Stenon.

Sécheresse de la muqueuse buccale et desquamation, œdème de la glotte.

Nous ne pouvons penser aux oreillons qui ne suppurent jamais, pas plus qu'à une parotidite infectieuse, un œdème du larynx ou une stomatite suppurée.

Nous avons à faire à un accident d'évolution de la dent de sagesse ayant entraîné une gangrène des glandes salivaires et du plancher buccal.

Du fait même de l'absence de température on est à peu près certain d'être en présence d'anaérobies (Fribert et Veillon 1898) en association avec la flore microbienne de la cavité buccale: staphylo, strepto, bacille fuso-spirillaire, et modification du lepthotrix qui existe normalement dans la cavité buccale.

Evolution rapide de la maladie, seulement 3 à 4 jours. Cette lésion n'a d'ailleurs pu se produire que grâce au fléchissement de la résistance organique de ce malade qui a diminué le pouvoir neutralisant de la salive et des muqueuses buccales favorisant l'exaltation de la virulence microbienne qui, par les voies lymphatique et sanguine a gagné les glandes, et aussi par un apport endogène qui fixe sur les glandes des germes de métastase. La voie ascendante est surtout la principale voie ayant permis l'infection.

Il est à remarquer que l'infection ne s'est propagée qu'aux organes ayant un orifice dans la cavité buccale, ce qui est en faveur d'une infection d'origine dentaire, dont la gangrène est une complication, sinon on aurait pu aussi bien se trouver en présence d'autres phénomènes infectieux et dans d'autres régions; nous nous sommes trouvés en présence, non seulement d'un accident d'évolution de la dent de sagesse, mais aussi d'une stomatite ulcéro-membraneuse dont le principal agent microbien a été le fuso-spirille, car étant donné le mauvais état général, si les staphylo et les strepto avaient joué un rôle prépondérant, le malade aurait fait une septicémie.

L'état du malade est jugé trop grave pour envisager un traitement chirurgical qui

n'eut pu qu'aggraver la situation et peut-être déterminer des embolies septiques. On se contente d'un traitement local consistant en grands lavages au Dakin et un traitement général par vaccin antigangréneux. Il en est d'ailleurs résulté une amélioration passagère, la douleur cédant légèrement et la bouche se fermant.

La mort survient le 2 avril. A l'autopsie, il a été impossible de prélever les organes qui étaient livides, friables, transformés en bouillie gélatiniforme.

Ce malade, âge de 48 ans, était né en Pologne, puis après beaucoup de malheurs et de misère, étant israélite allemand récemment émigré, avait été hospitalisé à Nanterre. De là, présentant des troubles mentaux, il fût conduit à l'infirmerie spéciale et transféré à Ste-Anne le 25 mars. Il refusa de s'alimenter, et réclamait sans cesse la pâque juive. Son état très précaire l'a fait soigner au sérum glucosé et physiologique, ainsi que par des injections d'huile camphrée. En somme, le terrain était tout préparé pour qu'à la moindre complication locale le pronostic devienne très grave.

Adresse de l'auteur: 56, Boulevard Pasteur, Paris (15^e).

Ostéomyélite Primitive du Maxillaire Inférieur *

par MM. BASTIEN et CARLIER
(Lille)

Depuis le travail classique de Gornouec en 1927 et la remarquable discussion qu'il suscita, la littérature a continué à s'enrichir des multiples travaux publiés sur l'ostéomyélite des maxillaires.

Comme l'ont souligné Ch. Lenormant et plus récemment Vrasse dans sa thèse inaugurale, on a souvent tendance à donner au terme ostéomyélite un sens élargi. On confond sous la même dénomination des lésions ayant leur point de départ dans deux régions pourtant physiologiquement si distinctes du maxillaire: la zone alvéolaire et la zone basilaire; et pourtant, on groupe dans un même chapitre différentes inflammations du tissu osseux que, dans un dernier scrupule, on dénomme ostéopériostite, ostéite suppurée, nécrose d'origine dentaire, ostéite diffusée et nécrosante, ostéophlegmon diffus et la localisation mandibulaire de l'ostéomyélite infectieuse aiguë qui reste "une inflammation franche, aiguë ou subaiguë du tissu osseux" réservée "aux accidents infectieux osseux les plus graves et les plus étendus" (Chompret) de la panostéite.

Cette confusion avait déjà amené Gornouec à "justifier le titre... choisi" pour son rapport et à expliquer pourquoi "il avait si longtemps hésité entre les deux termes d'ostéite ou d'ostéomyélite".

Cinq ans plus tard, Vrasse devait se faire l'ardent protagoniste de la dissociation de ces deux aspects cliniques et les réflexions de M. Rousseau-Decelle dans sa communication de 1937 soulignaient encore le malaise de cette confusion.

Aussi avons-nous tendance à préférer la distinction proposée par M. le Professeur Lemaître entre ostéite et ostéomyélite et à dissocier l'ostéomyélite vraie des maxillaires

* Communication à la Société de Stomatologie de Paris, séance du 21 mars 1939.

(ce qui impliquerait qu'il en est de fausses, comme Vrasse le souligne plaisamment) de ce que nous appellerons, peut-être abusivement, les syndromes ostéomyélitiques.

Pourtant, nous n'avons pas la prétention d'ouvrir aujourd'hui ce débat et d'en assumer la responsabilité à l'occasion de cette simple communication pour laquelle la dénomination d'ostéomyélite n'est pas discutable.

Nous voulions simplement rappeler le fait pour éviter de penser qu'à suivre la fréquence des publications, l'ostéomyélite est une affection que l'on rencontre assez couramment.

En réalité une telle conception serait dangereuse.

La statistique de Frohner donnant, sur 545 cas d'ostéomyélite avec 661 localisations, deux exemples d'ostéomyélite des mâchoires, reste vraie. Rappelons encore que "Dependorf n'en a relevé que 30 cas dans la littérature".

Nous-mêmes, à la Clinique Chirurgicale de l'Hôpital Saint-Sauveur, nous avons connaissance d'un premier cas publié par notre maître, M. le Prof. Agrégé P. Razemon dans l'*Echo Médical du Nord*, du 7 janvier 1933.

C'est l'observation d'un deuxième cas que nous avons eu l'occasion d'examiner que nous vous apportons aujourd'hui.

Observation.—R... E... entre le 10 février 1938 dans le service de notre Maître M. le Professeur Lambret, envoyé par son médecin avec le diagnostic de: "phlegmon sous-maxillaire".

L'affection a débuté brusquement voici quatre mois.

Des douleurs extrêmement violentes, empêchant tout sommeil, sont apparues au niveau du maxillaire sans présenter de localisations bien précises.

Sans cause décelable, une tuméfaction très douloureuse s'est développée en quelques jours au niveau des régions jugales et sous-maxillaires. Cette tuméfaction qui s'accompagnait de tous les signes inflammatoires aigus locaux et généraux (température à 39°2) est devenue rapidement énorme.

Pourtant, aucune localisation dentaire n'est relevée par le malade et l'examen de la denture reste complètement négatif.

Quelques jours plus tard, une incision sous-maxillaire laissait échapper une quantité abondante de pus bien lié. Après une sédation passagère, les phénomènes inflammatoires réapparurent, nécessitant un nouveau débridement.

A plusieurs reprises d'ailleurs, des contre-incisions furent pratiquées.

Pendant ce temps, des troubles fonctionnels importants apparaissaient, savoir: trismus, gêne à la mastication, à la parole...

Deux mois plus tard, un phénomène nouveau attirait l'attention du malade: toutes les dents du maxillaire inférieur se déchaussaient spontanément et le patient pouvait recueillir une à une des dents indemnes des lésions.

Il faut noter que dès cette période les phénomènes douloureux du début disparurent complètement.

Par contre, la gêne fonctionnelle n'avait fait que s'accroître: la mastication devenait impossible, la parole difficile et la déglutition pénible. L'état général déclinait de jour en jour.

Ne voyant survenir aucune amélioration, notant d'autre part l'apparition d'un nouveau "phlegmon", le médecin envoie son patient au Service de Chirurgie de l'Hôpital Saint-Sauveur.

A l'examen, ce malade de 46 ans présente une énorme tuméfaction de la région maxillaire inférieure. Cette tuméfaction fait disparaître le relief mentonnier et donne au visage un aspect pyriforme.

Les téguments sont tendus, livides et luisants et l'œdème qui les infiltre comble tous les méplats et toutes les saillies des parties inférieures et moyennes de la face.

A la racine du cou, une masse chaude, rouge, fluctuante, très douloureuse, semble être la continuation de la tuméfaction sous-maxillaire.

A l'inspection de la cavité buccale, on vérifie la disparition totale des dents inférieures. Les bourrelets gingivaux sont œdématisés, douloureux. Latéralement, le sillon gingival est rempli d'une sécrétion purulente et fétide qui s'écoule de multiples orifices et que le malade crache continuellement ou laisse baver au dehors.

En outre, à la partie postérieure du sillon, à droite et à gauche, on aperçoit des fragments osseux blanchâtres présentant tous les caractères de séquestres et qui "pointent" à travers la

muqueuse. Le malade a d'ailleurs déjà extrait quelques-uns de ces fragments aussi facilement qu'il a cueilli ses dents.

L'état général du malade est très touché. Il se sent très faible et a maigri de 12 kilogrammes. La température est à 38°5.

Cliniquement, diagnostic d'ostéomyélite du maxillaire semblait indiscutable. Cette ostéomyélite était vraisemblablement primitive, le sujet n'ayant présenté antérieurement aucune lésion dentaire.

L'examen radiographique pratiqué par le Dr Vandendorp confirme les données cliniques.

Sur le cliché de face on constate que les deux branches horizontales sont le siège d'une destruction à peu près complète; seul, un liseré périostique inférieur est visible des deux côtés.

La symphyse mentonnière a complètement disparu.

Dans la branche montante gauche l'ostéolyse semble absolument complète, sans aucune réaction périostique. Cette ostéolyse intéresse également l'apophyse coronoïde et le condyle qui est luxé.

A droite, les lésions paraissent moins avancées. Il subsiste un segment intact représenté par le condyle et par le col.

On décide d'intervenir rapidement: le 12 février, on débriide l'abcès cervical. Le pus qui s'en échappe est prélevé et examiné. On y trouve des staphylocoques abondants.

Le 16 février, après anesthésie au scophédal, on pratique par voie endobuccale l'ablation de nombreux séquestres. La branche montante gauche notamment est enlevée complètement. Ce sont des séquestres "gothiques", à l'aspect irrégulier et anfractueux, rongés et rugueux.

Les suites opératoires sont normales. L'ablation des séquestres, le débridement de l'abcès déterminent une rapide diminution de volume de la tuméfaction.

La température redevient normale.

Des lavages de bouche fréquents facilitent l'évacuation des sécrétions purulentes.

Le 8 mars on retire, de nouveau, des séquestres nombreux.

Dès lors l'état du malade s'améliore rapidement. Les phénomènes inflammatoires disparaissent complètement et le patient quitte le service le 10 avril 1938.

Nous l'avons revu le 10 décembre.

L'ablation des séquestres du maxillaire inférieur, le peu de régénération osseuse ont amené une rétraction considérable des parties molles sous-maxillaires qui donne au malade le profil d'oiseau.

La muqueuse buccale est complètement cicatrisée. La palpation met en évidence la présence d'une nouvelle branche horizontale très gracile, mais solide et qui permet, aux dires du malade, une mastication suffisante. L'examen radiographique montre qu'il ne subsiste à gauche que quelques îlots périostiques.

A droite, il persiste une bande inférieure de la branche horizontale, ainsi qu'à l'angle de la mâchoire. La continuité paraît assurée jusqu'au condyle.

Cette observation nous donne l'occasion de méditer sur l'ostéomyélite.

Du point de vue ETIOLOGIQUE nous pouvons tout d'abord éliminer la possibilité de causes d'origine dentaire: pas de monoarthrite apicale ni de gingivo-stomatite dans l'anamnèse pour expliquer la pénétration microbienne.

La brutalité du début de l'infection et surtout son extension concorderaient mal d'ailleurs avec une lésion localisée buccale.

Seul, l'acheminement sanguin nous semble être la voie possible de l'infection.

Mais le point de départ microbien nous échappe: aucune notion de processus suppuratif à distance (furoncle, anthrax, panaris...) n'a pu être relevée. Pas d'excoriations ni de lésions cutanées, pas d'angines ni de maladies infectieuses pour expliquer l'irruption microbienne.

Et nous trouvons là une circonstance assez fréquente qui veut que "la porte d'entrée à l'infection échappe aux investigations les plus minutieuses" (Vrasse).

Par ailleurs, nous trouvons les caractères étiologiques généraux de l'ostéomyélite primitive:

— D'abord, dans l'évolution chez un homme (49 p. 100 chez l'homme pour 36,5 p. 100 chez la femme d'après la statistique de Dobkine);

— Ensuite, dans la flore microbienne univalente et staphylococcique, qui sans être

l'apanage de l'ostéomyélite primitive (Rousseau-Decelle) est cependant plus souvent liée à l'ostéomyélite hématogène qu'aux ostéomyélites d'origine dentaire;

— Enfin, dans l'évolution primitivement basilaire qui est un élément en faveur d'une infection indépendante des dents.

Les explications pathogéniques nous semblent diverses:

— D'une part, il y a lieu d'envisager un apport massif de germes microbiens à virulence sans doute exaltée;

— D'autre part, la constitution spéciale du terrain qui permet l'action de cette bactérihémie.

Ce terrain dépend de conditions générales et de conditions locales:

de conditions générales: on ne peut s'empêcher de songer avec Wachsmuth, Heinrich et Takahashi au rôle possible des carences en vitamines A, B et plus spécialement C dans la résistance de la moelle osseuse aux lésions infectieuses.

Par contre, dans notre observation, la spécificité ne semble pouvoir être invoquée, quoiqu'elle puisse fréquemment sensibiliser l'organisme à de telles lésions;

de conditions locales: M. Rousseau-Decelle a mis en lumière le rôle joué par les caractères circulatoires de la mandibule. Le ralentissement de sa circulation terminale qui forme filtre aux éléments bactériens et pour laquelle l'action vago-sympathique doit jouer un rôle de premier plan (Dechaume) semble particulièrement favorable aux localisations sur cet os où un "travail moléculaire plus ou moins intense" s'étage durant toute la vie pour réaliser un "locus minoris resistentiae".

Nous voudrions retenir également certaines *conditions thérapeutiques*.

Dans notre observation, les thérapeutiques médicales adjuvantes n'ont guère été utilisées.

Peut-être que, mis en œuvre dès le début, des traitement par le bactériophage, par la vaccinothérapie, par l'immunotransfusion ou par l'anatoxine staphylococcique dont Mercié vient de montrer la valeur dans sa thèse, eussent enrayé ou atténué la gravité du processus ostéomyélitique.

Nous en doutons et restons persuadés que l'infection avait touché l'os trop rapidement et trop profondément pour pouvoir éviter la séquestration.

Au moment où le malade nous fut confié, il nous est apparu suffisant de favoriser le drainage des foyers purulents par voie endobuccale et de cueillir les séquestres constitués.

La bonne évolution de l'affection dès ce moment semble appuyer cette façon de voir.

Ainsi se confirme la priorité du traitement chirurgical que soulignait déjà M. Arlotta: "Ce traitement doit être absolument chirurgical; je ne crois que très peu à l'intervention des vaccins", disait-il.

L'intervention précoce et large s'impose dans les processus évolutifs, remarquait M. le Professeur Lemaître à l'occasion du V^e Congrès de Stomatologie.

L'ouverture prudente des foyers purulents par voie endobuccale, le drainage et l'ablation des séquestres bien constitués semblent la méthode thérapeutique de choix.

"La vaccinothérapie, la sérothérapie et les agents biologiques sont des méthodes adjuvantes sur lesquelles il est prudent de ne pas trop compter (Prof. Lemaître), au début elles peuvent servir à modérer l'attaque microbienne et à réactiver la défense organique, plus tard, le tissu est déjà trop altéré pour récupérer les lésions qui l'atteignent.

Peut-être leur action serait-elle plus favorable dans les ostéomyélites d'origine dentaire qui restent plus locales que dans l'ostéomyélite hématogène où bien souvent il y a une véritable sidération du tissu osseux.

Il nous reste quelques mots à dire sur le *traitement prothétique*.

La régénération osseuse du maxillaire de ce malade apparaît très appréciable. Ce n'est pas là une circonstance exceptionnelle, Proell en a montré l'importance.

La direction prothétique de cette reconstitution n'a pu être entreprise. Aujourd'hui apparaît l'utilité d'un appareillage qui pourrait s'appuyer sur le moignon osseux du maxillaire et servirait à rétablir la fonction et à maintenir les tissus mous.

Nous l'avons proposé au malade, nous nous contenterons de vous rapporter sa réponse: "Je suis guéri, je ne veux plus de nouvelles interventions, je mange très bien dans ces conditions!"

Ainsi nous avons pu suivre la destruction totale d'un maxillaire inférieur, sa reconstitution et la réadaptation d'un patient aux dégâts considérables qui ont bouleversé sa mâchoire.

Si nous vous avons rapporté ce cas, c'est que l'ostéomyélite primitive des maxillaires reste une affection rare (6,6 p. 100 des cas dans la statistique de Dobkine) et qu'il nous permettait de solliciter votre opinion sur une affection pour laquelle la dernière discussion de la Société remonte à près de deux ans.

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SNOWSHOE TRACKS

by
S. R. CRONE



Courtesy of The Beaver

"Across the mists of yesterday
 He sometimes comes to me,
A little lad just back from play,
 The lad I used to be.
And yet he smiles so wistfully,
 Once he has crept within.
I wonder if he hopes to find
 The man I might have been."



(Photo by Notman, Montreal.)

EARL M. LAURIN, D.D.S., L.D.S.,
Montreal, Quebec.

Associate Editor for Quebec of the Journal of the
Canadian Dental Association.

Graduated from McGill University, 1921.

Served Overseas in last War from 1915-1918 with
C.A.M.C. and C.A.D.C.

Past President, Montreal Dental Club.

Lecturer in Dental History at McGill University.

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The Present Status of the Sulphonamide Drugs

by M. K. McPHAIL, Department of Pharmacology, Dalhousie University

INTRODUCTION AND HISTORY

THE discovery of sulphanilamide and related compounds has opened up an entirely new field in the science of chemotherapeutics; already some 3000 compounds have been synthesized and investigated in the laboratory for antibacterial properties; several new and potent agents have been discovered and the prospect of finding further effective agents is bright. The story of the discovery has been told many times but so important is the subject that a recapitulation of the salient steps leading to the introduction of these agents might not be amiss at this point. Credit for the discovery must go first to the staff of the institute of experimental pathology and bacteriology of the I. G. Farbenindustrie at Elberfeld, Germany, where Domagk, the director, announced in 1935 that an azo dye containing a sulphonamide group would cure an otherwise fatal streptococcus infection in mice. The compound, sulphamido-chrysoidin, was called prontosil and had been synthesized by two chemists, Mietzsch and Klarer, for the dye industry and patented on Christmas Day 1932. Domagk* did not publish his first report until 1935 but certain clinical papers had appeared before this date attesting to the efficacy of the new

agent. Prontosil proved to be entirely without effect on bacteria in vitro and its mode of action in the body was a complete mystery until a group of workers at the Pasteur Institute put forward the view that the activity resided in that part of the molecule consisting of a sulphonamide group attached to a benzene ring. They had no proof that such was the case but argued from studies made on the therapeutic activity and chemical constitution of a number of different azo dyes. Assuming that prontosil in the body is split at the double bond they proceeded to test the therapeutic action of one component of this molecule and found it to be as active as prontosil itself. Thus began the study of p-amino benzene sulphonamide, now known as sulphanilamide. This compound was found to be not only as active as prontosil but active in vitro and it remained only to demonstrate that sulphanilamide appeared in the urine of prontosil-treated animals. This was soon done and an intensive program of clinical and laboratory investigation was launched. Several factors contributed in stimulating the interest of the English-speaking world in this drug, among these being the ease of preparation, the fact that it was not patented, and the publica-

* Domagk received recognition for this work by the award of the Nobel Prize in Medicine in 1938.

tion by Colebrook and Kenny in June 1936 of their dramatic results in the treatment of puerperal sepsis at the Queen Charlotte Square Hospital, London.

Unfortunately, much confusion resulted in these early years from a flooding of the market, by pharmaceutical houses, with sulphanilamide and sulphanilamide derivatives bearing trade names. Upwards of 30 different trade names have been used for sulphanilamide alone, a state of affairs described recently by Gaddum as "an awful example of the ingenuity of manufacturers". The Council of Pharmacy and Chemistry of the American Medical Association has done much to clarify the terminology by the adoption of non-proprietary names such as sulphapyridine, sulphathiazole, etc.

A survey of the literature on the sulphonamides reveals that of the hundreds of compounds studied a very limited number possess properties which render them important as chemotherapeutic agents. The bacteriological and pharmacological investigations, however, have lagged well behind the chemical studies and it is possible that some of the agents now passed over will be reinvestigated in later years and found to have valuable properties as medicaments. Besides sulphanilamide the most important would appear to be sulphapyridine, sulphathiazole, sulphaguanidine and sulphadiazine and this discussion will be confined to these agents.

PHARMACOLOGY

For the rational use of any drug a thorough knowledge of its pharmacology is essential and Marshall and his colleagues in the United States of America early laid the basis for such therapy by their careful investigations on the absorption, distribution, elimination and toxicity of sulphanilamide in man. The introduction of the newer sulphanilamide derivations called for further experimental studies and today the measure of therapeutic success obtained by a physician with these

agents in disease depends in no small measure on his knowledge of their clinical pharmacology.

More is known about the fate of sulphanilamide in the human body than of any of the other compounds. The drug, when administered by mouth, is well absorbed from the gastrointestinal tract, is fairly equally distributed throughout the body tissues and, if kidney function is normal, is readily excreted. It is excreted both as free sulphanilamide and as the inactive acetyl derivative. Conjugation probably occurs in the liver. The maintenance of adequate concentrations of sulphanilamide in the blood requires therapy approximately every four hours. Sulphapyridine is more insoluble and absorption is very irregular; it varies not only in different individuals but in the same individual from day to day. It, too, is fairly evenly distributed throughout the tissues, but more is excreted in the acetyl form than either with sulphanilamide or sulphathiazole; excretion is slow and this is a potential source of danger as conjugation is increased with the time the drug remains in the body and as it is poorly soluble tends to crystallize out in the urine. Sulphathiazole is readily absorbed and when kidney function is normal is rapidly excreted. It is conjugated in the tissues in about the same degree as sulphanilamide but the rate goes up if kidney function is impaired. Excretion is almost entirely by the kidney and for the most part is rapid, an important point as sometimes it is difficult to maintain adequate concentrations of sulphathiazole in the blood. Few determinations have been made on the distribution of sulphathiazole in the tissues but it has been established that it passes much less readily into the spinal fluid than does either sulphanilamide or sulphapyridine.

Sulphaguanidine is rather unique in that it is quite soluble in the stool and yet absorption from the gastrointestinal

tract is low. That which is absorbed is evenly distributed throughout the tissues and is conjugated only to a moderate degree.

Sulphadiazine is fairly well absorbed by most patients although its absorption is as a rule not as rapid as that of sulphanilamide or sulfathiazole. The peak concentration of sulfadiazine in blood is reached between the 6th and 8th hours and it is excreted mainly by the kidneys. Its rate of excretion is slower than sulphanilamide, sulphathiazole and sulphapyridine, and thus unlike sulphathiazole it is comparatively easy to maintain a therapeutic blood concentration. Another interesting point about sulphadiazine is that less is acetylated than with sulphapyridine and sulphathiazole and the acetyl derivative is readily excreted by the normal kidney.

MODE OF ACTION

An understanding of the mode of action of existing drugs would be of the utmost importance in the discovery of new ones. Unfortunately little is known about the mechanism of action of any chemotherapeutic agent and sulphanilamide is no exception to this generalization although numerous attempts have been made to understand its action. It is generally held that the sulphonamides are bacteriostatic (although they may be bacteriocidal in certain local sites as in the urinary tract), and their success depends on a direct bacteriostatic action and the integrity of the normal body defence system. The earlier views of increased phagocytosis, neutralization of bacterial toxins, morphological changes in bacteria etc., have been largely abandoned for lack of experimental support, and two separate theories of action are beginning to take shape. One, that the antibacterial action of sulphanilamide is the result of an interference of the drug with bacterial metabolism, either directly or possibly by making the protein available unfit for its

metabolism. It has been found for example that p-amino benzoic acid inhibits markedly the action of sulphonamides in bacterial tests; it is capable of completely neutralizing the bacteriostatic effect in vitro of sulphanilamide, sulphapyridine, and sulphathiazole in streptococcus, pneumococcus and staphylococcus respectively and also nullifies the curative effect of sulphapyridine in mice infected with Type I pneumococcus. The mechanism of action of this substance is not fully understood but the close similarity in chemical structure between it and the sulphonamide compounds suggests that there is substrate competition for some important enzyme essential for the metabolic activities of bacteria. This view is supported by the observation that only the para and not the ortho or meta derivative is antagonistic to the sulphonamides.

The other better known theory is that the sulphonamides inhibit catalase and thereby cause bacterial destruction through accumulated hydrogen peroxide. According to this view, the drug is changed to a catalase-inhibiting chemical by the oxidative action of bacteria locally in infected loci. Hydrogen peroxide, normally formed by certain bacteria in the course of their metabolism and continuously removed by the catalase present in the blood and tissues, thus accumulates and destroys bacteria. Sulphanilamide itself apparently is unable to inhibit catalase but the initial oxidation products of sulphanilamide (p-hydroxy amino benzene sulphonamide) exerts an energetic anti-catalase effect; further oxidation of sulphanilamide to p-nitro benzene sulphonamide accounts for the toxic effects of sulphanilamide in blood. The above theory would adequately account for the well known latent period of several hours which intervenes before the anti-bacterial action of sulphanilamide becomes evident. That such an oxidation product accounts for the potency of sulphanilamide is also

suggested by the fact that the hydroxylamine of sulphanilamide is many times more potent than sulphanilamide itself and acts without latent period. Although this theory is deserving of further study many questions remain unanswered by it, e.g., many organisms grow well in media poor in catalase, and there is no demonstrable correlation between peroxide production by bacteria and susceptibility to sulphanilamide.

FIELDS OF ACTIVITY AND THERAPY

To obtain the best results with the sulphonamides it is important to pay less attention to the conventional names of the diseases than to the underlying organisms and a knowledge of the bacteriology of the conditions will aid materially in selecting the most effective chemotherapeutic agent. Nevertheless speed of therapy is important and if an aetiological diagnosis requires time and the disease, from its clinical picture, is known to respond to a certain sulphonamide the physician should not hesitate to employ that agent. The danger of toxic reactions should be no contraindication but the patient should be questioned as to whether or not he has previously suffered a toxic reaction from one of these drugs and if so a test dose of the drug, 0.15—0.30 gm., should be administered, the patient watched for toxic manifestations for a period of 12 hours and if none are observed then therapy may be cautiously instituted.

Evidence to date would indicate that haemolytic streptococcal infections produced by organisms belonging to Lancefield's Group A are best treated with sulphanilamide. This seems to hold true, too, for chancroid, Welch bacillus infection (gas gangrene), lymphogranuloma venereum, meningococcal infections, *S. viridan* infections (other than sub-acute bacterial endocarditis), trachoma, and urinary tract infections due to the double zone-B haemolytic streptococcus and B.

proteus. Sulphapyridine and sulphathiazole are both superior to sulphanilamide for the treatment of gonococcal infections. Sulphapyridine is effective in gonococcal infections, certain pneumococcal infections, and, because it passes readily into the spinal fluid, in staphylococcal meningitis. Sulphathiazole is the drug of choice for most staphylococcal infections. In pneumococcal pneumonia and male gonorrhoea it appears to be as effective as sulphapyridine and has the advantage that it produces less vomiting. From laboratory and clinical trials it seems to be the most effective drug in the treatment of colon bacillary infections of tissues such as peritonitis and pyelonephritis as well as proving of considerable value in certain urinary tract infections. Sulphaguanidine shows promise of being an effective chemotherapeutic agent for combating bacillary dysentery. It is too early to evaluate the antibacterial power of sulphadiazine but so far it has been found very effective in treating streptococcus and staphylococcus infections in man.

In the following conditions the sulphonamides although not of certain value are worthy of trial: actinomycosis, brucella infections, haemolytic streptococcus infections, influenza bacillus meningitis, lupus erythematosus, pemphigus, sub-acute bacterial endocarditis, ulcerative colitis and infections due to Friedlander's bacillus; but would appear to be of no value in the following: common cold, influenza, paratyphoid fever, acute rheumatic fever, tuberculosis, typhoid (although will cure urinary infections of carriers), chronic sinusitis, anaerobic streptococcal infections, non-haemolytic streptococcal infections, Rocky mountain spotted fever, tularaemia, and trichomonas vaginalis.

In the therapy of the sulphonamides the patient must not be overlooked: all accessory measures of proved value must

be employed when indicated; the diet and fluids controlled, abscesses drained, sera administered if they are thought desirable, and massive therapy discontinued if there is no definite clinical evidence of the patient improving. With sulphanilamide it is rarely necessary to force fluids beyond 3500 cc. per 24 hours; larger quantities will eliminate the drug too rapidly. With sulphapyridine and sulphathiazole it is absolutely essential that the urine output be maintained at one to one and a half litres per day.

LOCAL ACTION AND PROPHYLAXIS

Reports from England and Spain indicate that the local use of sulphanilamide and sulphapyridine in the prophylaxis of war wounds has resulted in a decrease in the incidence and severity of wound infection. Superficial staphylococcal infections, wounds and burns (the latter two infected with mixtures of pathogenic microorganisms, often clear up promptly when dusted with sulphanilamide or treated with a sulphonamide pack. In dentistry it has proved of value when put directly into the sockets following extraction. Here, too, it has been used locally after surgical procedures such as extirpation of cysts, apicoectomy, alveolectomy; several grains of powdered sulphonamide being sprinkled into the wound before suturing.

There are several encouraging reports of the prophylactic value of the sulphonamides. Adequate sulphanilamide therapy to patients suffering from compound fractures prevents the development of gas gangrene; the treatment for 48 to 72 hours of the earliest stages of otitis media (beginning of earache) with sulphanilamide or sulphathiazole in children lowers the incidence of prevalent infection of the middle ear; and the use of sulphanilamide in post-operative treatment of appendicitis has markedly decreased the complication of peritonitis.

There is some good evidence that the administration of small daily doses of sulphanilamide from Oct. 1st to June 1st prevents the recurrence of the active manifestations of rheumatic fever in patients suffering from this disease. Administration of sulphathiazole as a prophylactic agent to patients undergoing resection of the large bowel or who have the risk of developing peritonitis following operative procedures in the abdomen has proved effective. Sulphaguanidine has also been successfully used in the prophylaxis of infections following resection of the large bowel.

DOSAGE

When prescribing sulphanilamide or its derivatives for the treatment of a severe infection due to streptococcus, pneumococcus, Welch bacillus, meningococcus, staphylococcus and gonococcus it is highly important to give a large initial dose in order that a therapeutically efficient concentration of the drug be obtained rapidly, and then sufficient doses at 4 hour intervals in order to maintain and augment the effect obtained by the first dose. In general in severe infections where sulphanilamide is being employed a concentration of 10 mg. per cent or slightly more in the blood should be held until an improvement in the condition of the patient is observed. In milder infections a blood concentration of 5 mg. per cent should be maintained.

In pneumococcal pneumonia where both sulphapyridine and sulphathiazole are equally effective, during the febrile period the concentration of these drugs should be kept at 4-6 mg. per cent. Sulphathiazole, as mentioned earlier, is generally recommended as it produces less nausea and vomiting.

In staphylococcal infections, except staphylococcal meningitis where penetration of sulphathiazole into the spinal fluid is poor, sulphathiazole is always employed. For small boils, furuncles, etc., it is not

considered advisable as the toxic manifestations of the drug are often greater than the benefits obtained. Patients severely ill with staphylococcal infections should be maintained with blood levels of 5-10 mg. per cent of sulphathiazole. In patients with pneumonia receiving sulphadiazine a blood level of 7-10 mg. per cent should be maintained.

The peroral route is by far the best in all forms of sulphonamide therapy but where this is not possible it is recommended that sulphanilamide be given subcutaneously, and sulphapyridine and sulphathiazole as the sodium salts intravenously. Intravenous injections must be made slowly.

In otitis media, mastoiditis and osteomyelitis adequate surgical drainage is necessary and sulphanilamide or its derivatives should be continued in moderate doses for at least 10 days after a clinical cure has been effected.

TOXIC REACTIONS

The sulphonamides like many other drugs are toxic and successful therapy requires a nice balance on the part of the physician between caution and boldness. Administration of insufficient quantities are not only ineffective but are likely to lead to prolonged therapy and toxic results; over enthusiasm can be rapidly serious. The toxic manifestations are both mild and serious. Into the category of mild toxic reactions fall the following: headache, nausea and vomiting, anorexia, cyanosis, dizziness, depression and sometimes a feeling of inebriation. These symptoms although generally mild may be the harbingers of more serious effects and the patient should be questioned daily as to how he feels. Sulphapyridine causes the greatest nausea and vomiting, sulphathiazole the least. Patients receiving these drugs should not be permitted to drive an automobile.

Among the graver signs of toxicity are nervous twitchings, acidosis, peripheral

neuritis, skin rashes, and drug fever. Of these the most frequent is drug fever; it generally occurs between the 5th and the 9th day and it is often difficult to differentiate between fever caused by the infection and that due to therapy. Rashes usually follow a variable period of drug fever; they are usually macular or maculopapular and their appearance is justification for termination of chemotherapy. Exposure to sunlight is a predisposing factor in their occurrence. Sulphathiazole is particularly likely to produce rashes of a type resembling urticaria.

The most serious reactions consist of hepatitis, renal irritation and anuria, and red and white blood cell destruction. The first is fortunately rare. The second is most likely to occur with sulphapyridine (although it may occur with the other common sulphonamides) as a result of a precipitation in the urinary tract of sharp crystals of the acetyl derivative and the urine of patients receiving these drugs should be carefully watched for crystal formation. Control of the fluid intake and urine output will usually give a clue as to whether or not mechanical obstruction of the urinary passages is occurring. Sudden severe acute anaemia accompanied by haemolytic jaundice may occur at any time during treatment by sulphanilamide and, although sulphapyridine and sulphathiazole are less culpable in this regard, red cell counts and haemoglobin determinations should be made at regular intervals during intensive therapy with these agents. Sulphapyridine, sulphanilamide and sulphathiazole in that order are likely to cause an agranulocytosis—several fatal results have occurred from this toxic action and a careful check on the white cell count of the patient must be kept during administration. The occurrence of a sore throat may give the physician an indication as to what is happening as it is very unlikely that a sore throat will result from other causes

under such intensive treatment; if it occurs therapy must be stopped immediately and fluids forced. These last reactions are serious and their appearance demands immediate cessation of the sulphonamide and the institution of restorative measures, but the fear of such reactions should not deter a physician from the use of adequate doses in those conditions where the drugs have been shown of definite value.

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*Treatment of Pyorrhea with the Help of Electro-Coagulation **

by EARL M. LAURIN, D.D.S., L.D.S., Montreal, Quebec

THE subject of Pyorrhea is far too vast to cover in detail in one lecture or many lectures and therefore I propose to give you what has proved very satisfactory in the treatment of pyorrheal conditions in my practice. However it would not be proper for me to give you this talk tonight if I were to omit another subject which is very close to my heart viz., History of Dentistry. I want to use it just as it is convenient for me to develop the subject at hand, namely, Periodontoclasia. This disease is by no means a modern one as there is abundant evidence to prove that it is as old as history itself. Eber's Papyrus shows clearly that the early Egyptians suffered from various forms of gum diseases. The early Chinese, as told in Darly's book, also suffered from gum disorders. Cornelius Celsus, 300 B.C. wrote about

the looseness of teeth caused by the weakness of their roots and said that in these cases it was necessary to touch the gums lightly with a red hot iron. Abulcasis, 1100 A.D., one of the great Arabian physicians, in one of the chapters in his book "De Chirguia," describes the various forms and colours of dental tartar found on the teeth. He invented several forms of scalers for its removal. He also recommended the use of the red hot iron or cautery for its treatment. Here is an extract of the translation as found in Guiverini's History of Dentistry.

"When, through excess of moisture, the gums become soft and flabby, the teeth loose and of no use are the remedies employed by thee, thou shalt lay the patient's head on thy lap and after having applied to the tooth where it borders on the gum the end

* Presented before the French Dental Clubs December 16, 1941.

of an appropriate little metal tube, in this you will quickly introduce the cautery designed for this purpose and shall keep it there until it is cooled. This must be repeated several times so that the action of the heat reaches right down to the root of the tooth. The pain, he said, will cease the same day or on the morrow. It is, however, necessary after the cauterization that the patient should keep his mouth full of good butter for an hour."

History is full of these discoveries which have been lost and rediscovered. There is no doubt in my mind that Abulcasis' treatment for these symptoms was sound. I might mention here that coagulation is not cauterization. It is not nearly as painful; it is more rapid and does not leave the same painful inflammatory reactions that are experienced by the use of the cautery. There is no odour of burning flesh, and the operation is more easily controlled. Many years later, in 1840, Dr. John M. Riggs seems somehow to have rediscovered this disease or at least to have fully described it, and gave as his treatment the scaling and polishing of the roots of the teeth. This is an excellent treatment which stands today as it did in his day, only he did not go quite far enough. He no doubt obtained many cures but the treatment must have been long and painful for the patient and very tedious for the operator. I understand that the operators who used this method employed as many as one hundred instruments which were designed to reach every angle of the tooth.

Dr. Joseph Head went one step further. He advocated destroying the infected pockets by the use of escharotics such as ammonium bifluoride which acts by chemical action. In 1911 autogenous vaccines of various formulae were used on the assumption that pyorrhea was caused by bacteria of the staphylococcus group. This treatment proved to be a

complete failure and has disappeared. There are no easy remedies for the treatment of this disease. Pyorrhea has been described on more than one occasion as a disease requiring surgery for its cure. Just as it is necessary to remove the appendix in most cases of appendicitis, so it is necessary also to remove the infected pyorrhea pocket in order to obtain permanent cure.

I have given you a brief description of the remedies used with success in the past and still used by many today. At this point I wish to make myself clear that I am not here tonight to sell you an electro-coagulator or the form of treatment which I have used for the past five years with a certain amount of satisfaction. I make no claim to being called a Pyorrhea Specialist but I do claim, as a general practitioner of dentistry, that pyorrhea should be more frequently treated in the offices or surgery of the general practitioner by whatever technique or system is best suited to the individual. On the other hand, the pyorrhea specialist is as important to us as the surgeon is to surgery. There are those odd complex cases where the advice and knowledge of the specialist is absolutely necessary. But some will say, why not refer all our cases to the specialist? Well, all I have to say is that there are not enough specialists to do but a small fraction of the work of the hundreds of thousands that require treatment and who are turned away from our offices to return later to have their teeth extracted and dentures inserted. Gingival infection is one of the chief sources of focal infection, so just a few words regarding focal infection.

Dr. Keilty states that 90% of the adult population of the United States and other parts of the world are suffering from some form and degree of pathological change of the gingival tissues, the periodontal membrane and the bone around the teeth. Dr. E. A. Hooton de-

clares that "if the human dentition breaks down it will carry with it in its fall the human species."

Are we, as dentists, doing our duty towards our patients who come to us for advice and who put their trust in us? If we fail them, what then? The day might surely come when the privileges which we enjoy might and could be taken away from us and controlled by politicians. The only group of men that can save teeth are the dentists. Are we saving them or are we "tooth-pullers and plate-makers?" What is the use of an elaborate, long and complicated scientific university course if, in the end, we lower our standards to the level of the dental mechanic?

The diagnosis of periodontoclasia is so simple yet there are many of us, though we see it daily, fail to recognize it until it is too late to institute effectual treatment to save the teeth. I do not have to deal very long on the subject of diagnosis as I am sure that every person present knows the symptoms. I will however, mention a few common symptoms by which it is recognizable:

1st: By the colour of the mucous membrane, if it is other than the natural colour.

2nd: By use of the dental radiogram. Pocket formation and the loss of bone may be readily seen in the x-ray.

3rd: Other signs and symptoms are soft spongy gums with swelling and occasionally the exudation of pus around the necks of the teeth.

4th: A most accurate means is by use of a probe. The pockets and their depths can be determined by measuring with a probe from the gingival margin to the base of the gingival crevice.

TREATMENT

There are many forms of treatment which the operator can choose such as

simple scaling; deep scaling and polishing, depending on the character of the case at hand; the surgical removal of the pockets or gingivectomy, or electro-coagulation. Diet also must surely be mentioned as playing its part as an adjunct in the treatment and cure of the disease. Much has been written and said on diet. Vitamin "C" deficiency seems to be one of the causative factors. Therefore it has been my custom to prescribe vitamin "C" in the form of 25 milligram tablets, 5 tablets daily for eight days. The dosage is reduced to two tablets daily thereafter.

It is my belief that no one form of treatment will cure an advanced case of pyorrhea but rather it is necessary to use a chain of co-ordinated steps, each one playing its part in the eradication of the disease. These steps can be subdivided into two groups, the first of which is carried on by the patient at home. It is his duty to carry out the instructions which he receives from his dentist regarding the care of his teeth and gums with the use of tooth-brushes, Drake stimulator, tooth-picks or dental floss. The second is office treatment. Let us assume that x-rays have been taken, the pockets charted and the occlusion has been adjusted, etc. We decide to use electro-coagulation as the surgical means of removing the loose gingivae and the infected pockets. Novocaine may be used as an anaesthetic, or one can simply swab the area with a topical anaesthetic. In dealing with deep pockets it has been my custom to apply both points of the electro to the bottom of the pockets. A little pressure is applied away from the root of the tooth and the current is switched on and the operation is completed in a few seconds. Where there are no pockets and the gingiva is hypertrophied, the electrode is applied to the surface of the gums only. I might state that it is almost impossible to

coagulate a firm healthy gum. There will be no bleeding. The area treated is sterilized by the heat of the high frequency current and the area coagulated is dead tissue which will slough away in five or six days. During this time the patient is instructed to keep using a mouth-wash of hydrogen peroxide or sodium perbotate and to keep the oral cavity as clean as it is possible under the existing circumstances. When the patient returns in five or six days, most of the sloughing will have disappeared, leaving raw surfaces. The dentist then begins his deeper scaling which is now easily accomplished as the serumal tartar is exposed and easily seen. Various instruments are used for this purpose such as Towner V-15 scaler; Clev-Dent. 7-8-9; McCall scalers and 17-18 McCall curettes made by S. S. White Co. After the scaling of the coagulated areas is completed, I find that it is absolutely necessary to use some form of medication to relieve the patient from a certain amount of discomfort and to help heal the areas involved. I have found nothing to compare with Dr. Ward's surgical cement. This consists of a powder and a liquid. These are brought together and mixed into a paste and packed all around the teeth by means of cotton pellets. This is allowed to remain around the teeth for a week. It is then removed. At this point the patient is instructed to use his Drake stimulator and tooth-brushes which he must use regularly after every meal and before retiring for the night. This chain of operations is continued until all the pockets and unhealthy tissue has been treated. As the

gums become firm, more deposits may be readily seen by the dentist. The exposed portion of the roots are scaled and polished. It takes me from six to eight weeks to complete a full mouth using one half to one hour appointments per week. During the first year the patient is asked to return every three or four months. This is done to ascertain if he is doing his part in keeping up the instructions given by the dentist and to check up on the occlusion and diets.

After using this system of treatment for five years, I can honestly say that although I have had some disappointments, my efforts have been most gratifying. Now just a word of caution. Electro-coagulation should never be used in acute cases of Vincents' infection nor in acute conditions of pyorrhea. There is, however, a place for coagulation in these cases and that is when the acute symptoms have been eradicated by whatever means one wishes to use in such cases. I am of the opinion that unless some form of pyorrhea treatment is given to the so-called "cured" trench mouth victim, the gums will never be normal. Although the tissues appear normal and the acute and infectious symptoms have disappeared, there still remains a low grade infection which must be taken care of especially when the acute conditions have persisted for some time.

(The paper was followed by a moving picture made and edited by the clinician which illustrated in colour every phase of the operations.)

Conventions

75TH ANNUAL CONVENTION OF THE ONTARIO DENTAL ASSOCIATION, ROYAL YORK HOTEL, TORONTO, MAY 18-21, 1942.

(Dentists from the U.S. and from all parts of Canada will be welcome.)

AMERICAN DENTAL ASSOCIATION, BOSTON, MASS., AUGUST 24-28, 1942.

18TH ANNUAL SESSION OF THE AMERICAN DENTAL ASSISTANTS ASSOCIATION, BOSTON, MASS., AUGUST, 24-28, 1942.

Case History

by HENRY A. THOMPSON, D.D.S., Toronto, Ontario

THIS is a case where the little patient, aged 6 years and 9 months, had an accident, and knocked her upper left central. The tooth eventually died and turned dark. (Fig. 1.)

In order to prevent any danger of focal infection or interference with the normal growth of the permanent central, I decided to extract this tooth. Then the question came up as to symmetric growth of the two centrals and I decided to extract the other central as well. (Fig. 2.)

Extrusion of the lower anterior teeth into the space was my next problem and I decided to build a bite plane.

The smallest and whitest teeth that

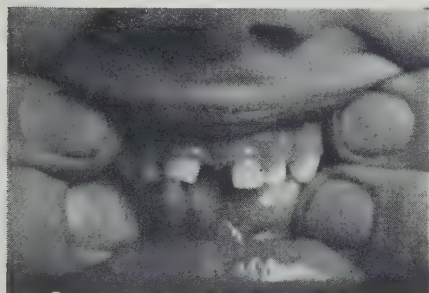


Figure 1
Before Extraction.

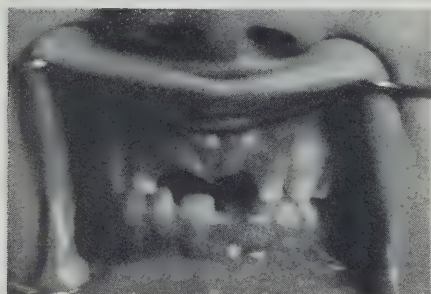


Figure 2
After Extraction.

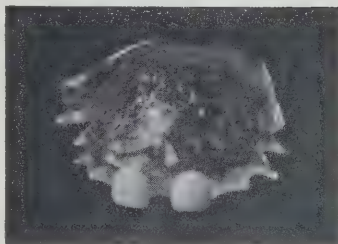


Figure 3
The Appliance.

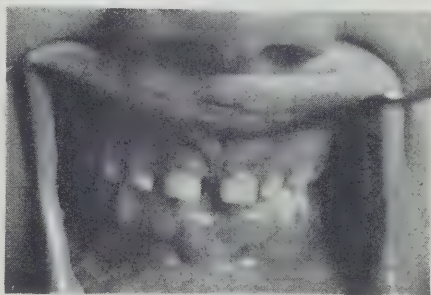


Figure 4
Appliance in Place.

could be obtained were then ground down, glazed and set up as facsimile reproductions of the natural teeth. (Fig. 3.)

The appliance is functioning as planned. The patient soon became accustomed to it and, needless to say, the parents are well pleased to have the appearance restored. (Fig. 4.)

At one time I used to construct basket clasps to retain these cases. I found eventually that these served little purpose, made the case more cumbersome and increased the cost.

The cases without clasps soon fit perfectly. A sprinkling of adhesive powder helps the patient over the first few days.

707 Medical Arts Building.

Root Resection

by M. H. GARVIN, Winnipeg, Manitoba

DR. THOMAS B. HARTZELL, of Minneapolis, presented a paper on "Root Tip Amputation" before the Dental Society of Western Canada in April 1911. He used a trephine to remove the mucous membrane and stated that the opening should be as large as possible without injuring adjacent teeth and that drainage should be maintained until the wound healed from the bottom. This paper was published in the *Dominion Dental Journal* in October of the same year.

In 1915 the writer had the privilege of seeing a newer technique used by Dr. Immanuel Ottesen, Dean of the School of Dentistry in Oslo, Norway. He demonstrated the open view method for root resection at the Dental School, University of Minnesota. An incision was made, the soft tissues retracted, the alveolar bone over the apex removed with a chisel, the end of the root amputated and the area curetted, an amalgam filling inserted in the apex, an antiseptic placed in the wound and the tissues sutured at the line of incision. Since that time this operation has had a definite place in our practice.

At a meeting of the Canadian Dental Association held in Montreal in 1916 the writer read a paper entitled, "Mouth Infection as it Affects the General Dental Practitioner," the paper being published later in booklet form by the Canadian Oral Prophylactic Association. In this paper the subject of Root Resection was discussed briefly. The work referred to at that time was done between December 1, 1915, and June 10, 1916, and comprised 112 operations on 83 patients. In most cases the root canals were retreated and refilled before resection but in some

cases this was not done where, for instance, it meant removing a bridge. In 95 cases silver amalgam was packed tightly into the apical end of the root canal not only to seal the canal but to avoid the exposure of a large area of devitalized dentine. In 17 cases amalgam fillings were not so placed.

In 19 of these cases cultures were taken at the time of operation, planting some directly on blood agar, and some in bouillon and from the latter transplanting to blood agar after 24 hours growth. The results showed streptococcus in 3 cases, streptococcus and staphylococcus in 1 case, streptococcus and bacillus in 1 case, staphylococcus in 4 cases, diplococcus in 1 case, bacillus in 2 cases, and no growth in 7 cases. Of course the culture media or the location from where the smear was taken might account for the cases with no growth.

Up to the end of 1920 we had resected 964 teeth for 679 patients, amalgam being placed in the apices of all of these teeth except the 17 to which reference has been made. Following 1920 we resected very few teeth for some years, not because we had lost faith in the operation, but because so much emphasis was being placed on the importance of focal infection that it became necessary to extract a number of resected teeth at the request of some physician, even though no clinical or roentgenographic evidence of the presence of any infection existed.

During the years, however, we have consistently resected teeth in selected cases and up to the end of 1941 have resected 1179 teeth for 862 patients. In 82 of these teeth copper amalgam was used in the apices, while silver amalgam was used in all other cases. Theoretically

copper amalgam should be preferable on account of its antiseptic qualities but roentgenographically the bone does not appear to fill in around the copper as well as when the silver filling is used. Of the 1179 teeth operated upon, 457 had the root canals treated or retreated before resection while in 722 cases the root canals were not touched before resection. This means that in cases of dead pulps or very poor root fillings the root canals were treated before resecting the root, but in cases where the roots appeared fairly well filled they were not retreated and the results seemed to be quite satisfactory. My partner, Dr. Douglas Brown, operated on 274 of these teeth and the writer operated on the balance.

As stated in 1916, we are still of the opinion that root resection has a place in the general practice of dentistry and that in performing this operation it is preferable to place an amalgam filling in the apex of the tooth. In cases of systemic involvement or in the case of elderly people, the tooth should of course be extracted but in younger and healthy

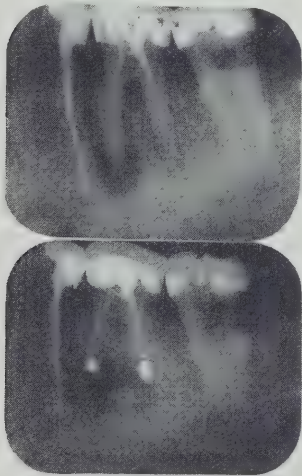


Figure 1
Lower first molar before and after resection.

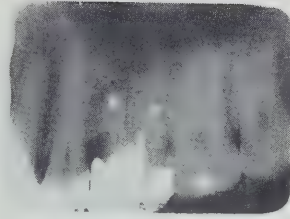


Figure 2
Resection of buccal roots of upper first molar.

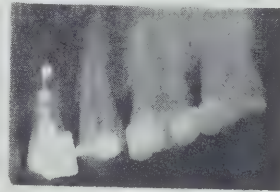


Figure 3
Upper first bi-cuspid eight years after resection.

patients root resection often helps one out of serious dental problems.

We have operated on all teeth except the second and third upper and lower molars. On two occasions in 1917 the writer operated on a lower first molar, *Fig. 1*, which must have been done to prove the possibility rather than from the standpoint of common sense, as such operations are not indicated in the hands of anyone according to our present viewpoint. In *Fig. 1* both molar and second bicuspid should have been extracted and a bridge inserted. About the same time, the writer resected the buccal roots of an upper first molar, the lingual root seeming to be in good shape, *Fig. 2*. Here again the molar should probably have been extracted. The upper and lower bicuspid were operated upon quite a number of times with considerable success, even where the upper first bicuspid had two roots, as in *Fig. 3*, which tooth was resected eight years previously. Two upper bicuspid are shown in *Fig. 4* before resection and six months later. A year ago we extracted an upper second

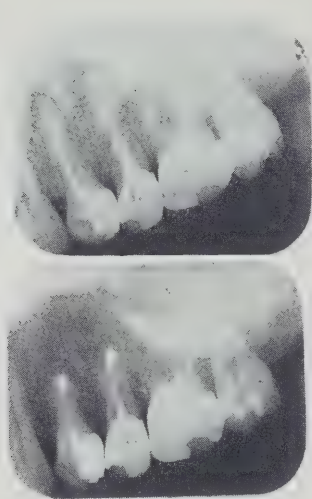


Figure 4

Upper bi-cuspids before operation and six months following resection.

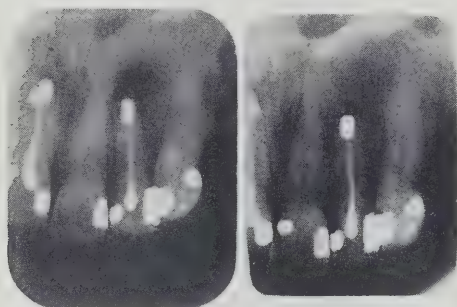


Figure 5

Upper central and lateral immediately following resection and four years later.

bicuspid which had been resected 22 years previously. An upper central and lateral immediately following resection, and four years later, are shown in *Fig. 5*. Two resected centrals are shown in *Fig. 6*, 21 years after the operation was performed. Porcelain crowns were on these roots at the time of resection consequently the root canals were not retreated before the operation. In *Fig. 7* is shown a cuspid which contained a dead pulp and which was treated in January, 1916. In November of the same year the apical tissues

did not appear satisfactory in the roentgenogram so the tooth was resected. In April, 1928, a four tooth bridge was inserted by my partner, Dr. Kenneth M. Johnson, using this cuspid as an abutment. That bridge is still rendering good service and *Fig. 7* shows the condition of this tooth in November, 1941, just 25 years after resection and thirteen years after the bridge was inserted. For this same patient the lower second bicuspid was resected in 1916 and the condition of this tooth is shown in 1938, *Fig. 8*, just 22 years following resection. In 1938 this bicuspid was extracted as the molars had developed hopeless periodontal lesions and had to be extracted and we preferred to place our clasp on the first bicuspid in making the partial lower denture.

Many upper bicuspid lend themselves to resection, but as a rule we believe that



Figure 6

Centrals twenty-one years after resection.



Figure 7

Cuspid twenty-five years after resection.

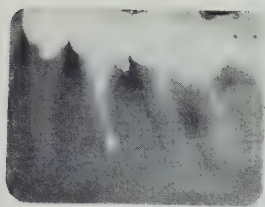


Figure 8

Lower second bi-cuspid twenty-two years after resection.

this operation should be confined to the six anterior teeth, upper and lower. And of course, it should not be considered in the case of elderly patients, or those of any age with a serious systemic involvement.

A few weeks ago a young man, aged 22, presented himself with an acute abscess over an upper right central. Some other dentist had treated this tooth previously and inserted a beautiful porcelain jacket crown which naturally the patient did not wish destroyed, so we resected this tooth and it appears to be clearing up perfectly, *Fig. 9*. We found visible pus present at the time of operation and in these cases particularly we expect considerable swelling. Heretofore we had used a mixture of iodoform and novocaine blown into the open wound with an atomizer before suturing but in this case we placed crystals of sulphathiazol sodium in the wound with the result that there was scarcely any swelling or pain. The operation was performed at four p.m. and the patient attended a business meeting that evening experiencing very little discomfort. The sodium salt of this sulphonamide compound was used on ac-

count of its solubility. In this case, also, a little antiseptic root paste was worked down into the canal from the apex before inserting the amalgam filling. This can be done frequently to advantage where the root canal has not been retreated. In all of these operations it should be emphasized that the incision should not be made too near the apex in order to ensure good visibility.

During recent years numerous articles have been written on the subject of root

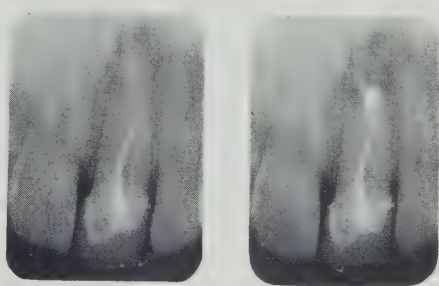


Figure 9

Upper central in acute condition and immediately following resection.

resections, most of which have outlined a procedure calling for the treatment of the root followed by the resection of the apex and without any filling placed in the apical end of the canal. This is all right where one can obtain easy access to the canal but in the case referred to in *Fig. 9* this would have meant the destruction of the jacket crown. We believe that we obtained a satisfactory result without making this sacrifice.—*From the office of Drs. Garvin, Johnson and Brown, 314 Somerset Building, Winnipeg, Manitoba, January 7, 1942.*

Real, genuine enthusiasm almost always works—and it usually works like magic. Ralph Waldo Emerson said: "Every great movement in the annals of history is the triumph of enthusiasm."

No one can develop it for you. You've got to do it for yourself—and you can do it by will power. Shake yourself awake every morning—say "Today I am going to be physically and mentally alive. I am going to put energy and spirit and enthusiasm into my work. I am going to live enthusiasm and be enthusiasm."—Dale Carnegie in a broadcast talk quoted in "World Digest".

The Forum

• THE AMALGAM RESTORATION

by PAUL F. O'BRIEN, St. Louis, Missouri
(Editorial in the Jour. of the Missouri State D. Assoc.)

G. V. Black wrote: *"The idea that amalgam is a cheap filling, to be done in 'any old way' should be discarded forever. The dentist should have the same pay for time in making amalgam fillings as in making gold inlays, and take the time to do it well. If he does his duty as well, the service to the patient in proportion to the time employed will be just as valuable. Fillings properly made of the modern amalgams are a close second to gold in their durability and in their protection against recurrence of caries. The difference is that the amalgam filling is the more difficult to make properly. It is more difficult to learn the manipulation, and even then, it is more difficult to secure perfect results regularly, filling after filling."*

IT IS APPARENT that amalgam occupies a low place in the scale of dental restorative materials in this day of the precision inlay, engineered bridge, and beautiful acrylic. For the reason that the greater the stake the greater the care, the gold inlay has been developed almost to its full potentiality and is highly regarded by both the public and the profession, while the amalgam restoration has developed little since the time of Black and has gained the respect of neither the public nor the profession. Yet amalgam is probably the mainstay of operative dentistry.

The material itself is not particularly distinctive in that uniformity of result is difficult to obtain, for no dental material can be manipulated satisfactorily with ease. If a favourable result can be obtained part of the time, through care and attention to detail that result can be repeated consistently. One is inclined to suspect that good amalgam work is made doubly difficult partly because of the relatively low fee it commands, and partly because inferior workmanship is not

readily detected by the patient and the ultimate failure may be ascribed to causes beyond the control of the operator. That a number of influences beyond control are involved must be acknowledged, but that those influences are often used as a cloak to cover the profession's half-hearted effort and lack of respect for the material, likewise, must be acknowledged.

The full responsibility, however, cannot be placed against the individual operator, for his problem is not only one of technical accomplishment but is economic as well. Ethically the patient's inability or unwillingness to pay an adequate fee is no valid excuse for limited effort, but from a practical viewpoint the operator cannot be expected to render a superlative service routinely at a financial loss. He can no easier produce his best amalgam work at the prevailing fee than discharge a fifty-dollar obligation with a twenty-dollar bill—unless he is engaged in the practice of dentistry solely for amusement. On the other hand, refusing to serve the patient who is unable or unwilling to pay reasonably well for the best quality of workmanship also requires financial independence. There is, of course, one ideal policy: acquire skill in technique, fully apply that skill, and then exact a fee commensurate with the effort—a threefold accomplishment, the last part of which is extremely difficult owing to the stigma of cheapness that has become attached to the silver filling.

The advent of the gold inlay was a death warrant to the superlative amalgam restoration. Fee comparison between the two precludes the full development of the latter. The fee that the superlative amalgam restoration should command closely approaches the inlay fee

that has gained public acceptance. Upon explanation, the discerning patient selects the inlay, while the patient of limited appreciation is not responsive to an adequate fee for any dental service. Despite the progress made through visual education in the private office, to most patients the amalgam restoration is just a silver filling, and by reputation silver is cheap. The public has not been educated to appreciate dental service as a health service, but considers mainly the intrinsic value of the material employed. For this attitude the profession is responsible through over-emphasizing the distinction between materials, and under-emphasizing the importance of the tooth itself. Too many practitioners sell the filling rather than a healthy, comfortable, and useful tooth.

Granting that the well constructed inlay is superior to the equally well built amalgam restoration, the disparity between the respective fees is not justifiable. The worth of the good inlay notwithstanding, two or three dollars for the amalgam against eight to fifteen for the inlay is clearly out of proportion if careful amalgam technique is followed. Usually the patient is given a choice between the relatively expensive inlay and the cheap silver filling. Again owing to the reputation of silver, there is no fee between the two that is acceptable to the average patient. The prevailing fee in the community (for inferior workmanship) is accepted as the standard and the operator who, without subterfuge, ventures beyond that standard soon becomes known as "too high priced." A distinction drawn between inferior and superior workmanship is scoffed at, and considered but an excuse to exact an excessive fee for a reputed inferior class of treatment. Amalgam service has been cheap too long in too many offices for the patient to understand why it should have become almost as expensive as the gold inlay.

Profitless fees eventually spell either

incompetency or insolvency. There is little profit in the inlay at the prevailing fee, if made correctly; there is no profit in the amalgam restoration at the prevailing fee, if it is made correctly. As an alternative, a truly adequate fee for amalgam work at large would accomplish a twofold purpose: discourage the construction of the mediocre inlay, and elevate the standard of amalgam service beyond measure. Since the well built amalgam restoration is superior to the inlay of poor quality, the patient would be better served, patient appreciation would improve, and the profession then have less cause for uninspired effort. Again the great importance of unity and understanding among the members of the profession, which can be brought about only through organization, is demonstrated.

• THE IMPORTANCE OF PAIN CONTROL

by CHESTER J. HENSCHEL, D.D.S.
(Condensed from *N.Y. Jour. of Dentistry*,
Dec., 1941.)

OUR procedures have been founded upon the premise that a little pain will not hurt. This is definitely untrue.

The profound minimization of operative pain would do much for preventive dentistry by eliminating the cause of most dental neglect. It is fear, not money or ignorance which keeps ninety per cent of our people from adequate care. Painful prevention cannot be taught! Adults cannot be legislated into attendance at free clinics. A child may be forced to receive treatment during his school days but most will desert us immediately upon graduation.

Reformed practice may result in causing the patient to fear the ravages of dental disease more than uncomfortable dental treatment. The scales will never be tipped while operative dentistry includes dull chisels, dry, used burs, and cold reagents.

Most operative treatment causes the patient pain, and anaesthesia should be employed in almost all cases. The technique of thermal control prevents about half the pain currently experienced, but there remains almost fifty per cent of our patients who require anaesthesia of some sort. The amount of anaesthesia actually administered today for operative treatment is pitifully small.

It is indeed rare to observe the administration of anaesthesia, whether infiltration, conduction, or analgesia for clinical operative treatment. It really matters little whether the clinic produced a good filling or inlay and saved a tooth; perfection of technique can reach only ten per cent of the people. We should strive for the other ninety. What does it really matter if our technical excellence is only 95 per cent perfect for the ten per cent who seek treatment? Very few of us are really trying to cut inroads into the vast untreated remainder.

Thermal control, (the stabilized temperature of dentine during the use of burs, stones, medicinals and in cementation), should be paramount in all operative treatment. However, when any pain is evident, suitable anaesthesia should be invariably administered. If analgesia is contra-indicated and the patient fears an injection as some do, analgesia should be employed or even general anaesthesia for the few moments of the injection. Pre-medication may be given. Sharp hand instruments and burs are of vital importance as a pain prophylactic. Teeth should not be worn away with burs; they should be cut. Ride out the bur, laterally. Pressure should be gentle, and in one direction at a time. It is not true that a little pain won't hurt. A little pain hurts everyone and it hurts some people terrifically.

Really painless dentistry will permit preventive dentistry and that will mini-

mize the need for painful procedures. The elimination of pain will remove the dread, and the lack of dignity of dental treatment. Our task is more difficult than that of the physician; our work is more arduous and our psychological problems more complex. It is only by the most earnest effort and intelligent co-operation that we shall succeed. Let the perfection of painlessness be our creed.

• DIET FOR THE UNBORN

A RECENT issue of "Newsweek" had the following to say of Harry Ebbs:

Milk, eggs, cheese, canned tomatoes, oranges, wheat germ and cod-liver oil were prescribed for 90 poverty-ridden expectant mothers by Dr. J. Harry Ebbs, Jr., of the Hospital for Sick Children in Toronto. If they hadn't money to buy the foods, he supplied them. To 120 others he gave only the usual medical care and advice. Six months after the babies had been delivered, Dr. Ebbs cast up accounts.

He found in the records of the mothers whose diets he had regulated and supplemented no miscarriages, no still births, and only two premature births. But the histories of the others showed seven miscarriages, four still births, and nine premature births. None of the babies born to the 90 mothers had died in the first six months, but ten infants in the other group, besides the four still births, succumbed before reaching the age of half a year. Furthermore, one out of every three of the "untended" mothers had a difficult time at delivery, and almost as many were unable to nurse their offspring, whereas only a very small proportion, 6 per cent, of properly fed mothers experienced trouble at the birth, and only 14 per cent were unable to nurse.



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Editor — M. H. GARVIN, Winnipeg

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The Passing of a Great Canadian Dentist

In the death of Andrew J. McDonagh, distinguished Toronto Periodontist, on February 10, Canadian dentistry has lost one of its most outstanding members. He commenced the practice of dentistry as an articled student in the office of Dr. Anson Ashley in Napanee, Ontario. Most of Dr. Ashley's instruments were made by himself and to his knowledge of metals and how to temper them Dr. McDonagh attributed his own success in designing and constructing the set of periodontal instruments used in his own practice up until the end. At that time local anaesthetics were not available and patients suffered a great deal of pain in the dental chair, so when Dr. McDonagh moved to Toronto in 1888 he began looking around for some method of painless extraction. The drug cocaine had been discovered but had not been used in Canada in the extraction of teeth. He tried it and it worked, using at first a ten per cent solution but later reducing to one or two per cent.

About 1901 or 1902 Dr. McDonagh became convinced of the fact that there was either something wrong with the method of tooth-brushing or

with the pastes used on the brush so a study was made of this problem and a number of papers read condemning the toothbrush and its use. In co-operation with chemists he found that pastes which were sold quite freely contained starch or sugar or both or even maple syrup or honey, so an effort was made to make a paste which would not be a menace to the health of the teeth and mouth. This took some time but eventually it was found that glycerin was the ideal medium and history has proved this to be true. Following this the Canadian Oral Prophylactic Association was formed which put the Hutax products on the market resulting in the Association being able to contribute over seventy thousand dollars to charity and education, in all of which Dr. McDonagh was a leading figure.

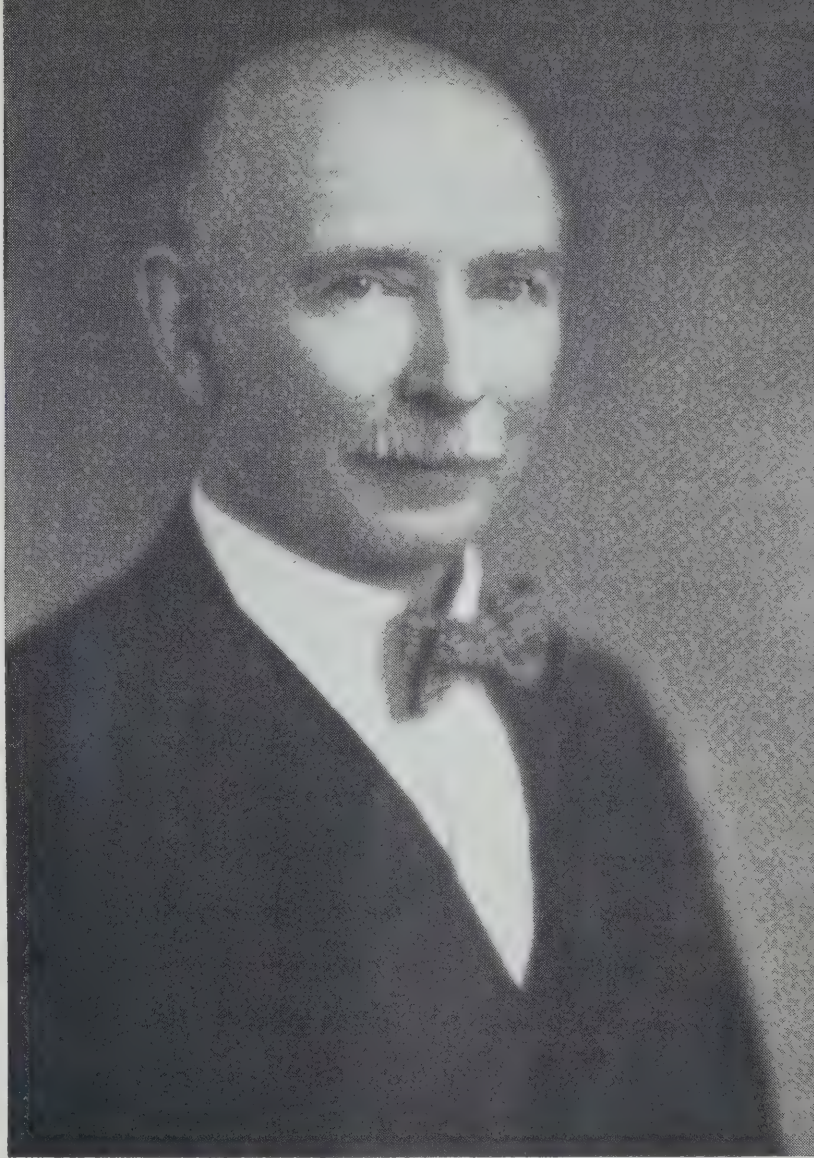
About twenty-eight years ago Dr. McDonagh and a number of prominent American dentists established "The American Academy of Periodontology". For a number of years he was Chairman of the Committee on Research and Nomenclature of that body. In 1920 he became President of this Academy and through the years has taken a keen interest in its welfare. At the time of his death he was the only surviving Honorary Member of this organization.

He was always interested in bacteriology and for a couple of years was examiner in this subject at the Royal College of Dental Surgeons of Ontario. He was also Professor of Crown and Bridgework for a time in this same institution. About 1909 or 1910 he established the first chair for the exclusive teaching of periodontology found in any college in the world. About 1920 he was placed in charge of the dental clinic in St. Michael's hospital which position he held until his death.

In 1914 Dr. McDonagh went to England as representative of the Canadian Dental Association and also of the Canadian Government at the Sixth International Dental Congress.

He was corresponding editor of the *Apollonian*; member of the Dental Editors Association; twice President of the Toronto Dental Association; a member of the Senate of Toronto University; represented the dentists of Ontario on the Cancer Committee of the Ontario Government; Honorary Life Member of the Ontario Dental Association; Toronto Academy of Dentists; and the Bloor and Yonge Dental Bowling Association; chairman of the Research Committee of the Canadian Dental Association; Past President of the Central Dental Association of Toronto and the Bloor and Yonge Business Association; member of the Royal Canadian Institute, Rosedale Golf Club and the Empire Club of Canada; First President of the Canadian Section of the International Association of Dental Research.

About the first of the century Dr. McDonagh was Managing Editor of the *Impartial Witness*, a weekly newspaper of which about five thousand copies were distributed every week. In 1895 he invented a bed for children, manufactured it and put it on the market, but found as other dentists have found, that if one is going to be successful in building up a dental practice it requires one's undivided attention so he gave up the beds and deserted the



ANDREW J. McDONAGH, L.D.S., 1867-1942

Impartial Witness giving dentistry his all. He has given clinics in all the larger cities of America as well as in Paris. He has also carried on a number of classes for the teaching of roentgenology.

Dr. McDonagh always believed that a stand which he took some years ago did more for the benefit of dentists and dentistry in Canada than any other activity with which he was connected and that at the same time it was more unjustly represented to the world than anything he ever did. This was the effort he made to bring the Dental College into the University of Toronto. In no small measure it was due to Dr. McDonagh's fighting spirit

that this happy relationship was consummated at as early a date as it was.

This is but a brief outline of the activities of this very busy man and yet, busy as he was, he always had time to be kind and generous and sociable and his loyalty to his many friends was outstanding. One would be unjust however in sketching this noble life if one did not recall his love for his home. Mrs. McDonagh always accompanied him on his trips and it was her devotion that made many of her husband's accomplishments possible.

Character never dies and Dr. McDonagh was a man of character. As Longfellow says:—

*"Were a star quenched on high,
For ages would its light,
Still travelling downward from the sky,
Shine on our mortal sight.*

*So when a great man dies,
For years beyond our ken,
The light he leaves behind him lies
Upon the paths of men."*

The members of the Canadian dental profession extend their heart-felt sympathy to Mrs. McDonagh and to the members of the family in their bereavement.

DR. ANDREW J. McDONAGH

A TRIBUTE

"He warmed both hands at the fireside of life."

Our dear old friend McDonagh's gone!
Now passed beyond the things of earth;
Beloved by all who knew him best
As man of true and sterling worth!

He was respected everywhere
Throughout the world of dentistry,
Which was his chosen sphere of work—
Decreed by fate and destiny.

A leader in his field was he
And new ideas did oft unfold
Along so many paths of truth—
One never thought of him as old.

As man of science and research,
He often used his voice and pen
To spread the gospel that he preached
Of service to his fellow men.

Unselfish to the last degree—
 So interested in his friends;
No trouble was too great for him,
 If it would serve to meet their ends.

There is no death—'tis but the dawn
 Of life triumphant evermore;
Its meaning we but faintly gleam,
 While standing on time's fleeting shore.

God rest his soul, we now all pray!
 We'll miss him through the coming days
And ever think of him as friend—
 In mem'ry's shrine an altar raise!

—Dr. W. A. Black.

TRIBUTE TO A GREAT MAN

Doctor Andrew J. McDonagh, beloved by his friends and patients alike, has suddenly been called to his reward. His was an extremely active career of useful service, for his philosophy of life was to show a little kindness, each day, to those with whom he came in contact. All during his lifetime he was a student, and developed a broad knowledge of science, particularly that branch relating to his chosen profession. A confrère has said of Doctor McDonagh: "Blessed by the wisdom of long and useful experience, he was always ready to share his knowledge, and few there are who, at one time or another, did not come within the circle of his friendship and goodness." Initiative was a ruling motive with him, and many organizations—scientific, educational, charitable and social—came into being as a direct result of his incentive to do things for others.

In 1906 Doctor McDonagh conceived and, in association with others, established The Canadian Oral Prophylactic Association, an organization to promote dental health education throughout the Dominion. The C.O.P.A. was instrumental in having a Department of Dental Research established in the University of Toronto. As a result, also, of the work of this Association many years ago, a beginning was made in the establishment of dental clinics in the public schools in the City of Toronto, and clinics are now operating in the schools of many other cities and towns. For several years the C.O.P.A. was the Educational Committee of The Canadian Dental Association.

Upon the organization of the Canadian Dental Hygiene Council, in 1924, the Canadian Oral Prophylactic Association turned over its educational work to this Council. It is needless to relate here what a grand work has been done, and is still being carried on from coast to coast, by the Canadian Dental Hygiene Council, working in association with the Departments of

Health and in different provincial governments, and under the sponsorship of the Dominion Government.

Enjoying a very close friendship with Doctor McDonagh, the writer knows how earnest he was in his endeavours to do all possible for the enlightenment of the public concerning the importance of a healthy mouth in the preservation of general health, and in planning ways and means to assist those unable to finance the cost of dental treatment, as well as to aid dentists whom adversity had overtaken.

Dr. McDonagh was keenly interested in sports, and played a good game of golf, as well as other games. Several years ago he organized an alley bowling group among some of his dental friends, which has resulted in many happy hours of recreation together. His passing will be keenly felt by his many friends, more particularly by those more intimate ones who addressed him as "Andy" or "Mac".

The dental profession has lost a valued member in the death of Doctor McDonagh; his family have been bereft of a loving husband and father, but the world will continue to benefit from his great interest and work in advancing the science of dentistry and of public health generally.

*"It takes great love to stir a human heart
To live beyond the others and apart.
A love that is not shallow, is not small,
Is not for one, or two, but for them all.
A love that asks no answer, that can live,
Moved by one burning, deathless force—to give."*

—George W. Grieve.

BOOK REVIEW

American Textbook of Prosthetic Dentistry, Edited by L. Pierce Anthony, D.D.S., Editor of the Journal of the American Dental Association and formerly Editor of the Dental Cosmos. The following leaders have contributed, L. Pierce Anthony, D.D.S.; W. E. Cummer, D.D.S., F.A.C.D., C.S.B.; Lester I. Furnes, D.D.S.; Harry J. Horner, D.D.S.; Edward Kennedy, D.D.S., F.A.C.D.; Richard H. Kingery, B.S., D.D.S., F.A.C.D.; P. C. Lowery, M.S., D.D.S., F.A.C.D.; Ellwin H. Mauk, D.D.S.; Ferdinand G. Neurohr, D.D.S., F.A.C.D.; Elbert Crosby Pendelton, D.D.S., M.D.S.; Eugene W. Skinner, Ph.D.; Russell W. Tench, D.D.S., and Charles R. Turner, D.D.S., M.D., Sc.D. Seventh Edition. Thoroughly revised, 1942. Illustrated with 842 engravings and 3 coloured plates. Published by The Macmillans in Canada, St. Martin's House, Toronto, Ontario. Price \$12.65.

As a result of the many and radical changes which have taken place recently in the technical procedures in prosthetic dentistry there has been a demand for a new edition of this well-known textbook. Many chapters have been rewritten entirely and a number of new chapters added including one on the acrylic resins as bases for artificial dentures.

The well-known status of the contributors assures one that only material has been included which has become sufficiently permanent to be retained in the textbook literature. In spite of all the emphasis being placed on preventive dentistry, the physiological and biological aspects of our profession, the fact remains that the major portion of a dentist's time is consumed in technical procedure of a prosthetic character. The perusal of this standard textbook should prove most helpful to the dentist who wishes to adopt the latest approved methods in his practice.—M. H. G.

CORRESPONDENCE

Notice of A.D.A. Convention

To Dr. W. W. Woodbury, President of Canadian Dental Association:

This is to notify you officially that the American Dental Association will hold its next annual convention in Boston, Massachusetts, during the week of August 24-28, 1942. The members of your association are cordially invited to attend and to participate in the proceedings. A special day is being set aside to honour our Latin American colleagues. We would appreciate your publicizing our meeting and urging your members to come to this country for the occasion.

We, also, solicit from your members scientific papers and exhibits. Members who plan to present scientific papers will be allowed forty-five minutes for the presentation of their subject. It is suggested that they limit their paper to fifteen minutes reading time and devote the rest of the allotment to the showing of slides or motion pictures.

In order to secure space on the program it is necessary that we hear from the individual in writing on or before May 1, 1942. A copy of the paper or an abstract of the proposed presentation should be in my hands, also, by that date. All correspondence should be directed to me at the above address.

This preliminary letter is being sent to all dental societies of Latin America. Other letters will follow giving more definite information as it becomes available.

(Signed) DANIEL F. LYNCH, Chairman,
1678 Primrose Road, N.W.
Washington, D.C.

Rationing of Gasoline

To Mr. J. L. Stewart,
Deputy Oil Controller:

With reference to our conversation of yesterday at your office, I am writing you regarding the relationship of the dental profession and the rationing of gasoline.

Let me first assure you that the dentists of this province are desirous of co-operating in every possible way with all necessary war measures. They are most anxious to give assistance towards victory and to do nothing which will hinder our war effort.

This office is in receipt of many communica-

tions from individual dentists, pointing out reasons why they should receive consideration in the rationing of gasoline. It should perhaps be pointed out that dentists in private practice are obliged to use their automobiles to a certain extent in making calls upon patients through emergencies. There are also specific instances where dentists will perhaps be forced to curtail their services if they are not allowed more than the lowest category.

(1) Due to the limited number of dentists, owing to enlistments in the Dental Corps, some men are attempting to keep offices open in two or three towns.

(2) Some men have hospital connections which means driving to and from their offices. These men are on twenty-four hour call and in some instances are a considerable distance from the hospital.

(3) Others have school dental services to care for and these schools are often a considerable distance from their offices.

In view of the many inquiries we are receiving at this office on the matter, it would be of assistance if you would write me, setting forth the situation as affecting the dental profession. It shall be my endeavour to have your reply published in our journals, which should assist in your administration duties as far as our profession is concerned.

Our concern is that dental services will not be restricted any further than is actually necessary.

(Signed) DON W. GULLETT,
Secretary, R.C.D.S.

Reply

To Dr. Don W. Gullett, Secretary,
Royal College of Dental Surgeons
of Ontario:

Your letter of 12th February, addressed to Mr. Stewart, Deputy Oil Controller, has been referred to the writer for attention.

The entire scheme of gasoline rationing is built upon "proof of necessity". Under the rationing system it is going to be necessary for all of us to completely revise our use of motor cars because a supply of gasoline, under the rationing system, is definitely limited to each individual depending upon the use to which he puts his motor car.

In the third paragraph of your letter you refer to dentists who receive emergency calls, and in answer to this we would say that unless the dentist is willing to use his personal supply of gasoline to answer these calls, the only alternative for him is to employ some public means of transportation such as taxicabs.

Answering those paragraphs of your letter marked 1, 2 and 3, we would advise that in such cases as these "proof of necessity" is required and question 4 of the application form

when completed, will provide the necessary information for us to determine into which category a dentist using his car under such circumstances will be placed.

In the event that you have not seen an application form, we are attaching two copies for your information.

The public will be advised through the press that application forms will be available at the Post Office within the next few days.

(Signed) P. J. DUGGAN,

For the Oil Controller.

DENTAL CORPS NEWS

Toronto Ladies Auxiliary, M.D. No. 2

The Ladies' Auxiliary to the Academy of Dentistry and Canadian Dental Corps M.D. No. 2 held a tea and business meeting in Eaton's Round Room on January 15 with Mrs. S. Stuart Crouch presiding.

Answering an appeal by the Red Cross for a donation to an auction sale at Ward Price Galleries, a cheque for \$25 will be sent.

Mrs. A. J. McDonagh reported knitted articles being sent overseas periodically with fifty-two articles on hand.

Mrs. E. T. Guest, convener of the scrap gold campaign, reported \$496.00 received to date as donations from patients to help the war effort. A Klondike gold thimble banded with nuggets, the gift of a generous citizen, was raffled at the meeting and \$14.75 was realized. The winner was Mrs. C. C. Rous.

Mrs. George Grieve and Mrs. Wm. Garard, sewing conveners, reported work being done on units for the Red Cross.

Mrs. Harold Skilling reported net proceeds of \$587.35 from the concert held in Eaton Auditorium.

Mrs. B. Sutherland convened the Dental Corps unit of the Christmas party given by the Citizens' Committee at the Armouries.

Mrs. J. S. Lapp of the East Group is again opening her home for a supper and variety evening on February 28.

Mrs. W. B. T. Amy, Mrs. E. W. Paul and Mrs. E. A. Sadleir of North and West Groups stated that members will make talent money for the war effort.

Mrs. J. W. McDonald told of many letters

of appreciation from officers and men of M.D. No. 2 for Christmas boxes.

Mrs. Fred J. Conboy presided at the tea table.

—JEAN K. MACGREGOR.

Ladies' Auxiliary, M.D. 1

The following is a report of the work undertaken by the Ladies' Auxiliary of M.D. No. 1 in 1941:

A tea was held at the home of Dr. and Mrs. S. M. Kennedy.

Mrs. J. A. Gillies gave her Travelogue on a trip she and Dr. Gillies had in the fall of 1937 and spring of 1938.

In June Dr. and Mrs. J. Frank Giffen loaned their gardens for a tea. Mrs. Giffen was assisted in receiving by the President, Mrs. A. F. Barnes, Lt.-Col. S. A. Moore and Major D. J. Ferguson, D.D.O. We had perfect weather and about 600 guests enjoyed the Auxiliary's hospitalities and we made over \$200.

Two home baking sales and a rummage sale were held.

In the fall a letter was sent to every civilian dentist in M.D. No. 1 with the result that we received many individual donations and many of the organized societies sent in liberal cheques.

Cigarettes are going overseas at regular intervals and boxes were sent to 64 officers and men at Christmas.

Throughout the year our receipts were about \$900.

WILLA A. GIFFEN, *Secretary-Treasurer*.

**M.D. 10, Headquarters Winnipeg,
Manitoba**

PROMOTIONS

Captain J. M. Grahame has been promoted to Major while in charge of a Central Clinic.

Captain W. A. Belden, who has been officer in charge of the dental clinic at the Brandon R.C.A.F. manning depot since November, 1940, has been promoted to the rank of Major, headquarters of No. 2 training command, R.C.A.F.

NEWS FROM THE PROVINCES

MANITOBA:

Winnipeg Dental Society

The February meeting of the Winnipeg Dental Society, held in the Club Rooms of the Medical Arts Building, was well attended and was very worth while. The guest speaker was the well-known obstetrician, Dr. F. G. McGuinness, his subject being "Recent Advancements in Obstetrics and Prenatal Care". The speaker said that Winnipeg had reached a new low in infant mortality giving the credit to prenatal care as the greatest single factor. The doctor said that any dental operation necessary to eliminate infection during pregnancy should be carried out as required and that frequent dental attention could be given without any fear of undesirable consequences. This is particularly true in the earlier months of gestation. The president, Dr. E. J. Robb, presided.

Dental Nurses and Assistants

The Winnipeg Dental Nurses' and Assistants' Association met on February 2, in the Green Room of the St. Regis Hotel, for its regular monthly dinner meeting. Miss Jennie Kunynsky, Vice-president, was in the chair and introduced the speaker, Miss Marguerite Kerr. Miss Kerr gave a very inspiring address, which was followed by an open discussion.

Miss Ann Thomson, Social convener, announced that arrangements had been completed for a social evening on February 24.

ONTARIO:

Toronto Academy of Dentistry

The annual Ladies' Night and dinner dance was held at the Royal York Hotel Concert Hall on January 22. About 275 members with their ladies and friends attended and were

received by President and Mrs. S. A. MacGregor, President Elect and Mrs. Lloyd M. Grose, Dr. Stuart S. Crouch and Mrs. Crouch who is President of the Ladies' Auxiliary and Dr. and Mrs. Gordon Chalmers. Dr. Chalmers was convener of the dance committee. The evening was spent in dancing and cards. Prizes were war savings stamps. Cheque for \$25 was donated to the Ladies' Auxiliary to the Canadian Dental Corps.

Congratulations and best wishes to Dr. S. C. Wilson, Perth, Ontario

Dr. Don W. Gullett, Secretary of the Royal College of Dental Surgeons, has just received a license renewal for Dr. Wilson who is now 83 years old and as he says, works every day with his son, Dr. Murray R. Wilson of Perth.

Dr. Wilson was graduated from Philadelphia College in 1890, practised in Michigan, also in Illinois before coming to Toronto. He takes pride in the fact he still has 32 teeth, no cavities, no fillings and healthy gums. What a record! He says, "They are the best in Lanark County, I think," and we agree.

Good luck and best wishes, Dr. Wilson.

Dental Nurses' Alumnae Association of Canada

The annual bridge of the Dental Nurses' Alumnae Association took place at the I.O.D.E. Headquarters, Toronto, on the evening of February 4.

The President, Miss Anna Lindsay, introduced Lt. Col. E. M. Wansbrough, Command Dental Officer, No. 1 Training Command, R.C.A.F. He explained that the proceeds from the bridge would be added to the Alumnae Fund for a mobile dental unit and stressed the need of more units overseas.

In drawing the lucky numbers for prizes,

Dean Arnold Mason of the Faculty of Dentistry, University of Toronto, Lt. Col. E. M. Wansbrough, Major D. J. Ferguson, District Dental Officer, Captain J. A. Grant and Captain A. J. Buchanan took part. Refreshments were served. The net proceeds from the bridge amounted to over \$180 making a total of over \$1000 raised for war purposes since September last.

Miss Phyllis Sandham, a graduate dental nurse from the Faculty of Dentistry, University of Toronto, Class '35 and now with the R.C.A.F., Women's Division, visited among her friends. She has been an ardent worker in the Alumnae and has served on the executive as Corresponding Secretary. She was the first dental nurse in Canada to enlist and the first girl to be accepted as a dental assistant in No. 1 Training Command. Miss Sandham is now at No. 5 Service Flying Training School at Brantford.

It was announced that on March 10 the Alumnae would meet at 79 St. George St., Toronto, with Mrs. H. J. Cody as their guest speaker.

OLGA GREENWOOD, *Publicity Convener*.

Ontario Dental Nurses' and Assistants' Association

BRANTFORD DISTRICT CHAPTER: After a dinner at the Hollywood Cafe on January 26, the Brantford District Dental Nurses and Assistants adjourned to Dr. Hugh Smith's office for the meeting.

The President, Alta Simon, conducted the meeting and, on behalf of the members, extended a warm welcome to Miss M. McKee, Superintendent and Miss C. Jackson, member of the staff of the Brantford Hospital and to the Executive of the Hamilton Chapter, who were guests at the dinner meeting. The speaker, Miss Jackson, gave a most instructive talk on "First Aid". Irene Douglas expressed appreciation to the speaker.

Miss Mary Healey, War Services Convener, reported that four quilts have been made and sent to Mrs. M. Edwards, the Provincial War Convener of the Ontario Dental Nurses' and Assistants' Association. Further plans were projected for war work.

MARION GREENSIDES, *Secretary*.

ESSEX AND KENT COUNTY CHAPTER: On Monday, February 2, the Essex and Kent County Chapter met in the Canada Building. During the business session final arrangements were made for the Valentine Bridge, and much time was spent in discussing plans for the coming Provincial Convention. The Vice-President, Florence Minchin, was in the chair.

Dr. Rene Rochon, Associate Professor of Operative Dentistry and Director of Children's Dentistry at the School of Dentistry, University of Detroit, gave an illustrated lecture. He told of the important role that the dental nurse and assistant plays in patient education, children's dentistry, radiography and telephone contacts. Dr. Rochon closed his lecture by demonstrating a simple and effective method of sharpening instruments using a facebow and roller. Irene McNair extended a vote of thanks to Dr. Rochon.

Members from Tilbury, Leamington, Detroit and Windsor were present, and Miss June Slattery was welcomed into the association.

WINIFRED GRIER, *Secretary*.

HAMILTON CHAPTER: The President, Margaret Thomson, presided at the dinner meeting of the Hamilton Chapter which was held on February 17, in the Wentworth Arms Hotel.

Dr. W. J. McEwen introduced the guest speaker, Dr. G. V. Morton of Toronto, whose subject was "Accounting, Records and the Proper Financial Management of a Dental Practice". There was a large attendance to hear Dr. Morton's fine address.

On Monday, January 26, the Executive of the Hamilton Chapter were guests at a dinner meeting of the Brantford District Chapter. (See preceding report of Brantford District Chapter meeting.)

GERTRUDE KIDNER, *Secretary*.

KITCHENER DISTRICT CHAPTER: Thirteen members of the Kitchener District Chapter met at the Iroquois Hotel in Galt for their January meeting. The President, Edith Oberhaltzer, was in charge of the business session, at which time detailed plans were made for the provincial executive meeting to be held in Kitchener on February 7 and 8. Letters were read from two men in the service overseas acknowledging receipt of Christmas boxes.

News from the Provinces

The guest speaker, the Reverend Dr. Lawson of the Presbyterian Church in Kitchener, gave a very inspiring address. Yvonne Jacques of Preston and Florence Allison of Galt were the hostesses for the evening.

RUTH CLARK, *Secretary*.

NIAGARA DISTRICT CHAPTER: Miss Helen MacFarlane of St. Catharines was hostess to the members of the Niagara District Chapter on February 2.

At the business meeting it was decided, on a motion by Margaret Fraser, seconded by Evelyn Rogers, to hold the regular meetings on the second Monday instead of the first of each month. A gift was presented to Evelyn Rogers, who will reside in Washington, D.C. after her marriage in February.

Sylvia Agnew won the draw for the war savings stamp. The war savings stamp contest is an enjoyable feature of the meetings. Each member contributes five cents which entitles her to a chance in the draw. The money over the cost of the war savings stamp goes into the chapter's war fund.

For their next meeting, the members will join the Hamilton Chapter on the latter's invitation.

MADELINE COOMBS, *Secretary*.

SUDBURY DISTRICT CHAPTER: The February meeting of the Sudbury District Chapter was held at the home of Dorothy Fowler on February 9. The President, Ina Leikas, conducted the business session.

Dorothy Fowler introduced the guest speaker, Miss Charlotte Douglas, Librarian of the Sudbury Public Library, who gave an interesting review on the most outstanding books of the year.

MARY KENNEDY, *Secretary*.

TORONTO CHAPTER: This is the first year in the history of our association that our Annual February Banquet has been cancelled. Our Social Convener, Miss Claire Routledge and her committee reported so many of our members actively engaged in voluntary war services, that the executive reluctantly decided to cancel banquet arrangements.

It was decided that we have a Get-Together Night. It was held in the Royal York Hotel on February 2 with the President, Irean Checkley, presiding. Miss Mildred Brown was at

the piano and Miss Madge Buik led the singing. Each member was invited to bring her mother or a lady friend to hear our speaker, Mrs. E. F. Hingely, an English war guest, evacuated from Sweden, who is at present residing in Toronto. The speaker told her experience leaving Sweden via Norway, Russia, Japan and the Pacific Ocean. The details of her three thousand mile trip across Russia were indeed interesting. We would highly recommend Mrs. Hingely as a most humorous and pleasing speaker.

The Patriotic Donators and Knitters Club exhibited an individual kit of knitted comforts of the type sent to soldiers in Canadian Active Service overseas.

The special guest in uniform for the Canadian Women's Auxiliary Air Force was Miss Phyllis Sandham, accompanied by Miss Brett, dental assistant from Regina, Saskatchewan, and also a member of the C.W.A.A.F. To these girls we wish the best luck possible.

The meeting closed with the singing of "The Flag".

KATHLEEN SIMPSON, *Secretary*.

PATRIOTIC DONATORS AND KNITTERS CLUB: The Patriotic Donators and Knitters Club has been made the Parent Body of the nine chapters of the O.D.N. & A.A. in order to allow all nine chapters to work under the protection of the Government War Charter issued to the P.D.K.C. in 1939. This change is essential in view of the fact that the Provincial War Fund does not hold a government charter. The change will in no way effect the present procedure of raising money in each chapter. It will, however, eliminate the Provincial War Fund.

Henceforth, all cheques covering monies intended for the Dental Corps will be made payable to the Patriotic Donators and Knitters Club, Parent Body, and mailed to Doris Gregory, the Provincial Treasurer. Miss Gregory will then be responsible for the handing over of all dental corps cheques to Leta B. Blaber, War Convener of the Parent Body. Earmark all cheques, "For the Dental Corps". Each chapter will nominate a War Convener, a Club Auditor and a Club Witness, one of these three officers to be the President of the chapter. You will, in due course, be notified by the Parent Body about the audit of your

books. Each chapter will send the audit to Leta B. Blaber, 148½ Bloor Street West, Toronto, who is responsible to the War Office in Ottawa for a complete audit of the nine chapters.

TOMYE TURNER, *President*, O.D.N. & A.A.
HELEN CAMPBELL, *Secretary*, O.D.N. & A.A.

FIRST ASSOCIATION MEMBERS IN C.W.A.A.F.: Phyllis Sandham, D.N. of Toronto and Madeline Coombs, D.N. of St. Catharines have enlisted in the Canadian Women's Auxiliary Air Force. Both will serve as dental assistants. As far as we know, these two members are the first to be accepted on the basis of their professional qualifications.

Phyllis Sandham was graduated from the School of Dental Nursing, University of Toronto, six and a half years ago. She has served as Secretary and Welfare Convener of the Toronto Chapter of the O.D.N. & A.A. and as Corresponding Secretary of the Dental Nurses' Alumnae Association. Miss Sandham had applied to carry on her profession as a member of the Air Force Auxiliary even before provisions were made for women in that branch of the service.

Madeline Coombs graduated from the school of dental nursing, University of Toronto, in 1938. Since then she has been employed in dental offices in Toronto, Chatham and St. Catharines. Miss Coombs is a charter member of the Niagara District Chapter of the O.D.N. & A.A. and until her enlistment served as Secretary of that organization.

The association is proud of its two members who are pioneering for their profession in the armed forces of our country. All members of the Provincial association wish Phyllis Sandham and Madeline Coombs continued success and good luck.

FERNA LEECH COOK, *Publicity Convener*.

QUEBEC:

Resolution

The following is an excerpt from the minutes of the meeting of the Provincial Board of Dental Surgery held in Montreal, on Friday, January 30, 1942.

"It has been moved by Dr. J. K. Carver, seconded by Drs. G. G. Armitage and F. Geoffrion, and resolved that the by-law No.

31 be abrogated and replaced by the following:

Each member of the College of Dental Surgeons of the Province of Quebec shall pay to the Registrar \$14.00, as annual fee provided for in article 91 of the Quebec Dental Act (R.S. 1925, c. 216, s. 91). This by-law will come effective starting July 1st 1942.

Starting July 1, 1942, the College will pay the Canadian Dental Association an annual contribution of \$4.00, per member in good standing with the College, provided however that all other provinces do likewise."

DENNIS FOREST, D.D.S.

Registrar of the C.D.S.P.Q.

ALBERTA:

Edmonton Dental Society

The January meeting of the Edmonton Dental Society was held in the Macdonald Hotel, Edmonton. Dr. S. C. Hodgson, the president, was in the chair. There were forty-one guests and members present.

Dr. Scott Hamilton is chairman of a provincial committee of the Alberta Dental Association appointed to study the acute shortage of dentists in rural areas, and to develop and operate a scheme to give some relief. He outlined a plan for city practitioners to visit, at intervals, points where the need of dental service is most acute. A letter has been sent to each city dentist asking co-operation, and the committee is now waiting their return. With over seventy dentists from Alberta in the C.D.C. there are many large areas of the province with no dental service at all.

Dr. R. R. McIntyre of Calgary, who was the guest speaker of the evening, addressed the Society on the subject of "Dental Fees". He stated that in recent years the standard of living has been steadily rising and more and more money spent on the luxuries of living with less and less of the people's earnings spent on health. At the present time the allotment for dentistry is very small compared to the amount spent on luxuries and non-essentials.

Dr. McIntyre suggested that one reason dentistry stands near the chewing gum level in the family budget is because the dental student graduates from college with very little training in economics for the successful operation of a dental practice. So many dentists are working long hours for small fees. This is not

only hard on the dentist, but not fair to the patient since it lowers the standard of work. The speaker showed it was inevitable that an inadequate fee must produce poor work. This can and does affect whole communities.

The remedy is not stricter control by our disciplinary committees. Friendly advice and counsel to the man who has fallen into these habits, and who is probably fast approaching a nervous breakdown, due to overwork, is a better answer.

There should certainly be some basic economic teaching given at the Dental School. This might well be done in a series of co-ordinated lectures given by Edmonton practitioners. A frank discussion of fees and practice building is as important to an undergraduate as a lecture on the cavernous sinus, or the physiology of the pancreas. The advice of established dentists on local conditions should be sought by new practitioners, for the good of all.

Capt. A. Singer, who is stationed at No. 3 Manning Depot, R.C.A.F., Edmonton, issued an invitation to the members of the Society to hold their next meeting at the Depot. Dinner will be served and the members will then be given an opportunity to inspect the Dental Clinic.

Calgary Dental Assistants' Association

The January meeting of the Calgary Dental Assistants' Association took the form of a social evening, when twenty members met on the 21st at 7 p.m. to attend a theatre party. Members were afterwards invited to the home of Miss Vera White, the President of the Association, where a sing-song and refreshments were very much enjoyed.

—M. G. AULD.

SASKATCHEWAN:

College of Dental Surgeons

The President's report and annual statement of the Council of the College of Dental Surgeons of Saskatchewan which came to hand in January, contains a number of interesting items.

During the year four new members registered, two on presentation of Dominion Dental Council certificates and two on successfully passing the examinations conducted by the Provincial University.

Grants were made during the year to the Public Health Committee of the Saskatchewan Dental Association, to the Western Canada Dental Society and the Canadian Dental Association. The increased support of the latter body, beginning this year, of four dollars per member annually, was reported to be very popular and the increase of the annual fee to cover it was well received.

Dr. L. D. Keown, of Moosomin, a pioneer dentist who has practised in the Province for fifty years, and had made a real contribution to dentistry in the Province as a member of the Council for many years, was made an honorary member of the College of Dental Surgeons of Saskatchewan.

Dr. A. J. Brett was re-appointed as Dominion Dental Council representative for the Province and Dr. L. J. D. Fasken as Provincial delegate to the Canadian Dental Association.

The Provincial Committee to co-operate with the National Health and Health Insurance Committee of the C.D.A. consists of Dr. C. W. Parker, Chairman, Dr. A. J. Brett, Dr. L. J. D. Fasken, Dr. C. H. Weicker and Dr. E. W. Mounteer.

GENERAL NEWS

Ninth Annual Postgraduate Course in Periodontia

New York University College of Dentistry, New York, New York

New York University College of Dentistry will hold its ninth annual postgraduate course in Periodontia for twenty sessions, as follows: Schedule A—morning and afternoon sessions, June 15 to June 26, 1942. Schedule B—

morning and afternoon sessions, June 15 to 17; mornings only, June 18 to July 8. All dates inclusive. The fee is \$100. COURSE LIMITED TO FIFTEEN MEN. Preference given in order of receipt of application.

The course will include etiology, diagnosis, and treatment of periodontal disease; various techniques of pocket eradication, with conservative treatment stressed; Vincent's infec-

tion; diagnosis of types of bone resorption; mouth manifestations of systemic disease; periodontal foci of infection; toothbrushing; instrumentation; diet; balancing of occlusion. Taught by lectures and clinical work, each student treating several cases.

Instruction by Doctors Samuel Charles Miller, Sidney Sorrin, J. Lewis Blass, and the entire Periodontia faculty.

For further information and application, address the Office of the Dean, New York University College of Dentistry, 209 East 23rd Street, New York, New York.

Campaign for Correct Diet for Civilian Defense

Representatives of the federal government, the municipal health department, the organized medical, dental and nursing professions, food industries and welfare agencies addressed a meeting in the Health Building, New York City, December 10, which opened a campaign to encourage the use of correct diets as an essential phase of civilian defense. The health commissioner of New York City, Dr. John L. Rice, who presided, said that the principal objectives of the program were to see that no one lacks sufficient food; second, that the wastage of food in homes and restaurants be stopped, and, third, to prevent the hoarding of food. The acting mayor, Newbold Morris, pointed out that the problem was mainly one of education and recommended as educational material a booklet prepared for distribution by the city health department entitled "Food Joins the Colours." Dr. W. H. Sebrell, deputy assistant director of the Federal Security Agency in charge of nutrition, pledged the support of various co-ordinating bureaus of the federal government in the nutrition program in the various cities. Assistant Superintendent of Schools William Jansen said that plans had already been worked out for the mass feeding of children that might have to leave New York City. Deputy Welfare Commissioner Leo Arnstein said that his department aided the needy to get proper diet not only by direct cash assistance but also through three thousand investigators of the department giving clients on relief advice on nutrition. City Markets Commissioner William F. Morgan, Jr., said that no bombing of the New York City

area would cause serious food shortage, as the most exact information exists on what food and how much is handled at each market and depot, and preparations have been made to re-route food deliveries in case of bombings.—*Jour. A.M.A., Jan. 3, 1942, Vol. 118, N. 1; per A.D.A. Release.*

Dentists' Committee of Greater New York, B. W. R. S., Inc. Appeal for their Colleagues in British Dental Clinics and Hospitals

With victims of bombings badly in need of dental and oral attention in Britain, THE DENTISTS' COMMITTEE OF GREATER NEW YORK, B.W.R.S., organized last April, has begun an active campaign to help their fellow dentists in Britain to cope with this difficult problem, and they are asking every member of the dental profession to open up this drive by contributing *one dollar* toward this fund.

The Dentists' Committee has sent out an appeal to all of their profession in Greater New York.

Each dentist has been sent an emblematic STICKER, with our new "Thumbs Up" symbol as the motif, and each has been requested to use it to show his sanction and approval of this Cause.

Funds to help British Dentists to carry on in their dental clinics and hospitals, to provide them with much-needed supplies, and to replace dental equipment in bombed hospitals are greatly needed, for though there has been a respite recently in these bombings, nevertheless thousands of bomb-victims still require dental care, and the havoc created earlier in the year was so extensive, that many clinics have been so terribly handicapped by lack of funds as to make it imperative to help them if they are to continue their humanitarian work.—*N.Y. Jour. of Dentistry, Jan., 1942.*

New Zealand and New York

Not long ago, New Zealand inaugurated a system of dental nurses or "sub-dentists," who are employed in the public health service to place fillings and perform other procedures for children. On October 4, the House of Representatives of New Zealand, under the urging of Health Minister Arthur H. Nordmeyer, passed a bill creating a system of medical care

beginning November 1, 1941. Under the terms of this act the medical profession in New Zealand may not recover more than a maximum of \$1.50 per visit from a patient. The patients are reimbursed for their expenditures up to this amount by the Social Security Fund. The practical effect of this will be to standardize fee levels throughout the country.

This arrangement seems so unfair, and New Zealand so far away, that most readers will be constrained to let this matter pass by lightly. However, when we recall that this objective of social reformers was attained under wartime stress, with over a third of the country's doctors serving in the armed forces, we are reminded that in this country, too, the forces of "reform" will strike when opportunity arises.

Aside from the grave social and public health implications in the New Zealand experiment there remains the human problem of how the doctors are to live under working conditions that "the government would not dare to impose on the weakest labor union." There are those in our profession who constantly bait the trap of socialized medicine with the tempting lure of "security." This type of "security," in New Zealand, placed beside the munificent \$1200 per annum offered to full time dentists by New York City, should be posted as a permanent exhibit and warning to those whose desire for "security" blinds them to all else.—*N.Y. Jour. of Dentistry*, Jan., 1942.

Medical Students Ask U.S. Subsidy

A plan for governmental subsidies for medical schools and medical students with lengthening of the school year, in order to meet the pressing demand for a rapid increase in the supply of medical men under war conditions was asked by the Association of Chicago in December.

Thirty thousand medical men will be needed in the next two years under the war program and it is estimated that this will amount to about a third of the total number in actual practice in the country. The selection of these men must be made from the larger metropolitan centres in order not to deprive rural communities of medical service. Chicago, it is estimated, may lose up to two thousand of its five thousand physicians to war services in the next two or three years.

A bill is now being drawn for Congress, it was announced, which would provide federal funds to be distributed to medical schools to make possible sufficient increases in their facilities and teaching staffs to permit them to accept 1 per cent more than their average number of students. Additional funds also would be made available to finance the course for students, some 30 per cent of whom under present conditions work or borrow their way through school.—*Ill. Dental Journal*, Jan., 1942, V. II, N. 1.; per A.D.A. Release.

Three Golden Rules of Nutrition

In co-operation with the Federal Office of Defense Health and Welfare Services the Women's National Emergency Committee currently broadcasts a Sunday afternoon radio series, *Listen America*, over the NBC Red Network. On this program are presented the following "three golden rules of nutrition."

1. A sound foundation for buoyant health can be built with seven ordinary foods: milk, fruits, eggs, seafood, meat, green vegetables, and bread with adequate vitamins in it.
2. As far as you possibly can, see to it that every day you eat at least: *a pint or more of milk*, so as to get some vitamin A, some of the B vitamins, good proteins, and plenty of calcium; *enriched bread* or biscuits, or *whole grain cereals*, or *whole wheat bread* (and enriched flour whenever you use white flour for cooking purposes) so as to get B vitamins and minerals; either a *tomato*, an *orange*, a *grapefruit*, or their juices, so as to get plenty of vitamin C; a big helping of *green leafy vegetables*, and *sometimes yellow ones* (raw or lightly cooked) so as to get more vitamin C, more vitamin A, and minerals; *eggs*, or *lean meat*, or *seafood*, so as to get more proteins, several B vitamins, and iron; an *apple*, a *peach*, a *pear*, or other *fruits* in season, so as to get added minerals and vitamins.
3. Then, unless your doctor has you on a special diet, eat anything else you like, in moderation, including the necessary fats. You will, in this way, be getting a daily nutritionally adequate diet.—*Ill. Health Messenger*, 1/1/42, Vol. 14, N. 1; per A.D.A. Release.

Dental Clinics in High School

A dental program for the secondary schools of greater New York has been announced by the Board of Education. Dental hygiene clinics are to be set up in junior high schools, senior high schools and vocational schools and are to be self-supporting and will be operated under the general supervision of the Department of Health.

Moderate fees are to be collected from children in low income families, and from the proceeds the salaries of the dental hygienists will be paid. Children from relief families will receive treatment without fees. Children whose parents can afford private dental care will be excluded.

The present program, as announced, is intended to fill a long felt need for dental care among school children. The new clinics to be set up are to employ dental hygienists, not dentists. The hygienists will give dental "health education," instruct pupils in home care of the teeth, do follow-up procedure, chart dental defects and do prophylaxis.

It is expected by the Board of Superintendents that the function of the proposed prophylactic clinics would be partly educational and partly service to individuals. The dental hygienists assigned would be employed approximately half time in each field.

Pupils whose parents have a home relief status shall be treated without cost, if proof of such status is furnished to the principal. All other pupils shall pay the prescribed fee of \$1 per completed treatment.

The compensation of the dental hygienist shall be \$30 per week, for a five-day week consisting of a five-hour daily session. The engagement of the dental hygienist shall be on a week to week basis and all matters concerning the provision of her compensation shall be the responsibility of the principal.

The Board of Superintendents realizes that public dental service is properly the function of the Department of Health, not of the school authorities. — *Excerpt from editorial, N.Y. Jour. of Dentistry, Jan., 1942.*

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

Captain Morgan Charles Hawkins, formerly of Port Hope, Ontario, was killed in a flying accident in England February 8.

Captain Hawkins was the son of Dr. and Mrs. M. S. Hawkins of Port Hope. He volunteered his services to the Canadian Dental Corps at the beginning of October, 1939 and was called up on November 27, going to England in September, 1940, where he was attached to the R.A.F.

Captain Hawkins was born in Port Hope on July 7, 1915, and received his early education in that place. He was graduated in dentistry from the University of Toronto in 1937 and practised with his father in Port Hope before accepting a commission in the Dental Corps.

He was a member of the United Church of Canada and the Xi Psi Phi Fraternity.

Besides his parents, he is survived by his wife, a small daughter, and one sister.

•
Edgar A. Dolson, of Toronto, Ontario, died February 17, following a lingering illness.

He was interested in boys' work some years ago at Camp Franklin and was one of the original founders of the Invictus Club of Toronto. He was a member of Parkdale United Church, also a Mason, being a past master and first I.P.M. of Fidelity Lodge.

Dr. Dolson is survived by his widow, one son, two daughters, two brothers and four sisters.

. . . SECTION FRANÇAISE . . .

Comité de Rédaction

Président

Paul Geoffrion, B.A., D.D.S., A.I.D.O., F.I.C.D.

Assistant

Armand Fortier, D.D.S.

REDACTEUR

ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516 est, rue Sherbrooke, Montréal, Québec

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Y. Lafleur, D.D.S., St-Hyacinthe
V. Plamondon, D.D.S., M.Sc.D., Québec
C. Godin, D.D.S., Trois-Rivières
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France
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Contribution Annuelle

\$14.00 au lieu de \$10.00

Pourquoi cette augmentation?

En effet voici bien une question que nombre de confrères vont se poser, avec une révolte apparemment légitime, en lisant cet extrait du procès-verbal de notre Bureau des Gouverneurs, séance du 30 janvier 1942.

"Il est proposé par le docteur J. K. Garver appuyé par les docteurs G. G. Armitage et P. Geoffrion et résolu que le règlement no 31 soit abrogé et remplacé par le suivant:

Tout membre du Collège des Chirurgiens Dentistes de la Province de Québec est tenu de verser entre les mains du registraire la somme de \$14.00 comme contribution annuelle, prévue par l'article 91 de la Loi des Dentistes de Québec (S.R. 1925, c. 216, a. 91). Ce règlement entrera en vigueur le 1er juillet 1942.

Le Collège, à partir du 1er juillet 1942, versera annuellement à l'Association dentaire canadienne une contribution de \$4.00, par membre en règle avec le Collège, à condition toutefois que les autres provinces paient la même contribution."

Evidemment une augmentation de notre contribution, en ces temps difficiles, peut paraître un abus à ceux qui ignorent quels graves dangers ont couru notre profession et le public et de quels dangers plus graves encore ils seront menacés demain. Il semble bien que toutes les provinces du Canada ont scrupuleusement étudié cette proposition avec l'idée bien arrêtée de n'y pas souscrire si elle n'était pas nécessaire. Or, il paraît qu'elle fut votée partout avec la même unanimité et que toutes les sociétés dentaires de la province l'avaient recommandée. Il y a donc lieu de croire à sa nécessité. Bien plus, nous croyons que c'est un cas d'urgence. Il suffit pour s'en convaincre de lire le court résumé qui suit, d'une causerie donnée par le Dr Armand Fortier, président de notre bureau provincial.

L'Association Dentaire Canadienne, a-t-il expliqué à ses confrères, est une association professionnelle et nationale de grande envergure. Elle groupe tous les

chirurgiens dentistes du pays et chaque province y est représentée proportionnellement.

Sa fonction est de promouvoir, de défendre les intérêts et les prérogatives de la profession, chaque fois que ses intérêts communs sont en jeu. D'un autre point de vue, cette Association doit être considérée comme le complément nécessaire de tous nos corps provinciaux sans que pour cela elle puisse s'immiscer le moins du monde dans la discussion ou le règlement des problèmes d'intérêt local ou provincial que notre collège a le pouvoir de régler.

Ici le conférencier nous dit qu'il n'est pas facile d'énumérer tous les champs d'action où l'Association Dentaire Canadienne a rendu service à notre profession, mais qu'il se contentera d'en mentionner quelques-uns.

Corps dentaire Canadien.

Commission du tarif.

Répression de la pratique illégale.

Comité de législation, etc.

Il s'en trouve peut-être qui malgré notre état de guerre se préoccupent bien peu de savoir comment fonctionne le service dentaire pour les armées. Il est tout de même un intérêt collectif dont ils ne peuvent se départir, c'est qu'ils tiennent avec raison à ce que notre corps professionnel soit considéré comme autonome et respectable dans tout le pays. C'est à cela que des membres de l'Association Dentaire Canadienne se sont dépensés sans que nous ayons à nous déranger.

Lors de la dernière guerre, notre service dentaire n'était qu'un bien humble complément du service médical dont il dépendait complètement. Il n'était donc pas autonome comme la profession a la prétention de l'être.

Cette fois-ci, dès le début de la guerre, à la demande du ministre de la Défense, l'Association Dentaire Canadienne nomma un comité sous la présidence du Dr Lott avec mission d'étudier le problème du service dentaire dans une armée moderne. A ce point de vue les armées française, anglaise, américaine, allemande et japonaise furent l'objet d'une étude approfondie. Qui de nous dans une pareille affaire se serait senti l'ardent désir de faire des voyages et de donner gratuitement son temps à une pareille organisation? Notre intérêt commun exigeait pourtant que ce fut fait. A la suite de cette étude, le comité de l'Association Dentaire Canadienne put présenter au ministère un rapport intéressant qui recommandait la formation d'un corps dentaire indépendant, ayant son propre chef et dont les officiers seraient susceptibles de promotion à des rangs égaux à ceux des autres services de l'armée.

Il en résulta que le corps dentaire canadien fut constitué avec le colonel Lott comme commandant. On nous accorde un dentiste par 500 soldats et nos confrères y peuvent détenir des commissions de lieutenant, de capitaine, de major, de lieutenant-colonel, etc. En fait nous pouvons nous enorgueillir de posséder le plus beau corps dentaire du monde. Voilà un résultat concret de la sagesse et de la prévoyance d'un corps professionnel national bien organisé.

On nous a objecté quelque part que ce militarisme est un mal qui a perdu certaines nations et en perdra d'autres. Soit, c'est un point de vue dont la discussion arriverait trop tard, mais il est une chose que tous admettront sans discuter: Si ce ne sont pas les dentistes qui ont déclaré la guerre, nous y sommes quand même et notre devoir est de veiller à ce que le peuple et notre profession n'en souffrent pas trop. Or, comment pouvons-nous voir à de tels intérêts sans une association nationale puissante?

Il était impossible que l'état de guerre ne nous suscite pas comme à tous de nombreuses difficultés. Etait-il logique que nous laissions régler tout cela par des gens qui ne connaissent pas les besoins de notre profession?

Ainsi personne n'ignore les misères que nous avons à nous procurer les produits essentiels à notre pratique et les droits et restrictions de toutes sortes dont sont accablés ces mêmes produits dont le coût s'est trouvé majoré de 20% à 30%. Eh bien dans ce domaine et malgré les faibles moyens dont elle dispose, l'Association Dentaire Canadienne a fait son possible et obtenu des résultats dont elle a raison d'être fière.

Grâce aux efforts de son comité de législation, l'Office des prix et du commerce en temps de guerre a consenti à réduire de 10% à 6% les droits imposés à la plupart des produits dentaires importés des Etats-Unis. Nous n'avons aucun chiffre qui nous permette d'établir de façon précise l'économie que cette mesure a fait réaliser aux dentistes du pays. Cependant on peut d'une façon conservatrice évaluer la valeur taxable de ces produits à \$6000,000. Une économie annuelle de 4% représente donc pour les dentistes canadiens un gain d'au moins \$25,000. De quel droit pourrions-nous exiger que quelques-uns se sacrifient gratuitement pour nous faire réaliser un tel gain. Cette économie à elle seule suffirait à justifier l'existence d'un support financier adéquat à notre groupement national l'Association Dentaire Canadienne.

Ne l'oublions pas ces résultats et d'autres encore dont il est question plus loin, ont été obtenus par les efforts bénévoles de dentistes qui, comme nous tous, ont une clientèle qui requiert leur attention tout aussi bien que la nôtre. Avons-nous le droit d'exiger pour nous et nos clients, cette protection sans faire notre part? Est-il juste que quelques-uns et toujours les mêmes, se sacrifient toutes les semaines; fassent des voyages, assistent à des assemblées souvent fort longues, aillent faire de l'antichambre chez M. un Tel ou chez M. un Autre, discutent avec celui-ci ou celui-là, prennent leurs veillées ou leur temps de bureau à rédiger des projets, des articles, à faire des corrections, à préparer des impressions, à correspondre avec tout le pays, à payer leurs dépenses et cela au profit de tous et sans compensation. Non, ce n'est pas possible, ce serait trop injuste. Ce qu'il nous faut: c'est quelqu'un qui rémunéré convenablement pourra donner tout son temps à notre cause et nous obtenir ainsi des résultats encore plus considérables. Car ne l'oublions pas la lutte n'est pas finie.

Les médecins considèrent leur contribution à la A.M.C. comme un bon placement par rapport à la protection qu'ils en reçoivent.

Et ce n'est pas tout ce que nous devons à l'Association Dentaire Canadienne.

Grâce à ses efforts, le réglemant du trafic de l'or fut aboli pour nous. Sans cela il aurait fallu que chaque dentiste du pays se procure une licence pour vendre ses rebuts d'or. A \$1.00 par praticien cela veut dire \$4000.00 de moins à dépenser pour la profession. En plus des instruments, des matériaux essentiels à l'exercice de notre profession ont été enlevés de la liste des articles prohibés et sont de nouveau à notre disposition. Un bon nombre de ces concessions obtenues par la A.D.C. étaient d'un caractère préventif et ne nous sont connues que par les ennuis qu'ils nous évitent.

Un genre de pratique illégale, non pas de celle contre laquelle il faut sévir presque tous les jours, mais bien plus subtile et bien plus dangereuse pour le public et la profession menaçait d'envahir tout le pays.

Il s'agissait des promesses faites par le "Ward Dental Laboratories" de livrer une ou deux belles pièces de prothèse en acrylique moyennant une somme ridicule, à tout client qui consentait à mordre dans un boudin de cire et à le lui envoyer par la malle. Ce laboratoire infestait l'ouest du Canada par ses annonces dans les journaux, mais donnait son adresse à Boîte X, Montréal, d'où la correspondance était vraisemblablement réexpédiée aux Etats-Unis.

Il a fallu un comité de pratique illégale de l'A.D.C. et la coopération des "régistres" des provinces concernées, beaucoup de patience et beaucoup de démarches pour alerter le ministère des postes qui à son tour appliqua la loi de la fraude par la poste et supprima le brigandage. Sans cela nous en aurions été infestés comme les autres provinces.

Enfin et surtout même si rien de ce qui vient d'être dit précédemment n'avait existé, il vient de se manifester un cas d'urgence qui devrait attirer notre plus sérieuse attention. A lui seul il suffirait à motiver une action résolue et rapide dans le sens d'un support financier plus considérable de l'A.D.C. "On étudie un plan d'assurance-santé".

"Ottawa, 16 (P.C.)—Un arrêté ministériel déposé à la Chambre des communes, par

l'hon. Ian Mackenzie, ministre des pensions, autorise le gouvernement à poursuivre l'étude de l'assurance-santé en vue de préparer un plan de cette nature. Le décret pourvoit à la formation d'une commission spéciale devant être connue sous le nom de "Commission consultative sur l'assurance-santé". Ses membres n'ont droit à aucune rémunération.

Le directeur de la santé publique, le Dr J. J. Heggerty, en est le président. Les autres membres sont le Dr L. C. March, conseiller du ministère des pensions et de la santé nationale; M. A. D. Watson, directeur du service de l'assurance; cinq représentants du Bureau fédéral de la statistique; MM. J. C. Brady, S. B. Smith, Mlle M. E. K. Roughsedge, J. R. Munro et J. T. Marshall. Le comité comprend aussi M. W. G. Gunn, du ministère des pensions, et M. C. E. Stevens, du ministère des transports."

Lisez attentivement cette petite dépêche de la Presse Canadienne, parue le 16 février et voyez si nous ne sommes pas menacés de la dentisterie d'état. Le Dr Philippe Hamel lui-même a donné devant les Sociétés dentaires de Montréal et de Québec des causeries pour nous montrer comment la dentisterie d'état peut bien être une des conséquences naturelles d'un désordre social grave que par esprit de parti nous continuons de tolérer dans le pays. Certains n'y ont vu qu'une marotte politique. Nous sommes ainsi faits, que nous tâchons d'accabler et surtout de ne pas entendre ceux qui s'efforcent de nous montrer les conséquences certaines de notre légèreté, de notre faiblesse et l'aboutissement inévitable de notre insouciance à l'égard du bien commun. Faut-il attendre d'être frappé du mal pour comprendre ceux qui veulent tant nous prévenir.

Nous ne savons pas si nous pourrons un jour publier ces conférences, mais en attendant jetons un coup d'oeil sur le premier aperçu que nous a donné le Dr Armand Fortier.

Nous savons tous que lors de la dernière session, le gouvernement fédéral a voté une loi d'assurance chômage d'une vaste portée sociale et dont les privilèges empiètent sur le domaine provincial. Certaines autorités fédérales enchantées du résultat et brûlant du désir de profiter de l'état d'urgence créé par la guerre et de l'appauvrissement des masses, veulent aller plus loin dans le domaine de l'étatisation, de la centralisation et préparent en ce moment à Ottawa un projet de législation d'Assurance-Santé "Health insurance legislation". On veut bien par l'étatisation atténuer les conséquences de la dictature économique, mais il n'y a pas de danger que par une étatisation légitime on tue le mal qui cause celui qu'on veut atténuer.

Evidemment que de tels plans existent sous différentes formes en France, en Angleterre, en Allemagne et en Nouvelle-Zélande. Aussi eut-il été sage d'en étudier les causes en même temps que le fonctionnement.

Mais nous en sommes là, et le plan tel que préparé (qui nous l'espérons, subira des modifications), prévoit les soins médicaux et dentaires d'après l'échelle suivante.

Estimé d'après une prime de \$16.00 par an et per capita.

	Pourcentage	Montant
1 Médecine	45%	7.20
2 Spécialiste chirurgien	5%	0.80
3 Hôpital, ambulance et anesthésique (à contrat)	15%	2.40
4 Examen de laboratoire Rayons X, analyse de sang	4%	0.64
5 Garde malade, hôpital et maison	4%	0.64
6 Appareils chirurgicaux, pansements etc.	2%	0.32
7 Dentiste	4%	0.64
8 Oculiste, verres	2%	0.32
9 Ambulance, traitements spéciaux	3%	0.48
10 Administration	4%	0.64
	100%	\$16.00

Ces chiffres à coup sûr ne sont pas définitifs et nous avons bien l'impression que jamais le sort de la communauté n'aura été si à plaindre. Et que dire des professionnels. Même si nous allions réussir à faire porter l'item dentiste à 10% cela ne ferait \$16.00 par tête, par année.

Evidemment il nous manque des données pour en comprendre le fonctionnement. Qu'allons-nous faire? Je parie que dès l'apparition officielle de ce projet les 4000 dentistes du pays vont envahir Ottawa, assiéger ministres et députés pour qu'au moins cette mesure ne soit pas trop dommageable au public. Non, vous avez vu tout de suite, par absurdité, qu'il faut absolument quelqu'un et même plusieurs personnes d'officiellement chargées de veiller à nos intérêts.

Nous considérons même que cette question d'Assurance Maladie à elle toute seule suffirait à légitimer une contribution plus considérable à notre association nationale. Si nous voulons que nos intérêts soient représentés et défendus dans des circonstances comme celle-ci, il nous faut une Association forte qui dispose de fonds suffisants pour agir vite et bien, retenir les services d'avocats spécialisés, de gens capables de faire de l'antichambre au besoin pour faire valoir notre point de vue et protéger le public contre une mesure qui peut lui être néfaste.

Il est important de ne pas oublier qu'en traitant d'un projet semblable avec les autorités fédérales, il faut être en mesure de les convaincre qu'il peut éblouir à première vue tout en étant contraire à l'intérêt public. Car si nous ne prenons que les intérêts de notre profession, nous risquons de nous aliéner la sympathie des gouvernements qui n'ont (ou prétendent n'avoir) que l'intérêt public à coeur. Voilà, nous le croyons, notre position en face de l'A.D.C. Nous ne doutons pas un instant que la profession trouve qu'il y a des raisons péremptoires d'augmenter notre contribution à notre association pour en augmenter les pouvoirs.

La Rédaction.

Traitement des Canaux Radiculaires Infectés

CONGRES DENTAIRE NATIONAL

(SEANCE DU 8 JUILLET 1937)

TRAITEMENT MEDICAMENTEUX DES DENTS INFECTEES

par JACQUES LUBETZKI,
Professeur à l'Ecole Dentaire de Paris

Le traitement des dents infectées revient périodiquement à l'ordre du jour de nos congrès dentaires. Tout pourtant semble avoir été écrit sur ce grave sujet depuis l'époque historique qui a vu le sacrifice de toutes les dents déulpées ou infectées. La théorie focale, nous ne l'avons jamais niée, mais nous en avons établi les limites. Depuis quinze ans, nous avons essayé de mettre de l'ordre dans nos idées et dans nos méthodes. Si nous avons été tentés, un instant, d'envisager un avulsionisme rétrograde, à l'abri de la théorie de l'infection focale, c'est à notre thérapeutique trop simpliste que nous l'avons dû. Nous ne savions pas traiter une dent atteinte de carie pénétrante ou nous ne voulions pas la traiter. Nous avons eu le courage de reconnaître nos erreurs. Ne retombons pas dans ces graves errements. Actuellement, notre thérapeutique radiculaire nous donne d'excellents résultats. Allons de l'avant vers le progrès, vers une thérapeutique toujours plus rationnelle, mais ne retournons pas en arrière. C'est alors que les partisans de l'avulsion systématique reprendraient leurs arguments et ils auraient raison.

La dent infectée est considérée comme le cas pathologique le plus difficile à traiter et dont la thérapeutique présente des aspects très différents.

La thérapeutique médicamenteuse qui n'exclut aucune autre méthode de traitement exige au point de vue pathologique et au point de vue biologique une connaissance approfondie de l'infection du canal radiculaire.

Le traitement par cette méthode exige, en effet, beaucoup de soins et beaucoup de temps. Il apparaît, à l'heure actuelle, comme un peu en retard sur toutes les autres méthodes plus ou moins rapides, dont la presse professionnelle française ou étrangère nous rend compte périodiquement.

Je me souviens de cette méthode préconisée vers 1906, je crois, qui aspirait les microbes et les remplaçait par une pâte antiseptique. Elle n'a résisté ni à la logique scientifique ni à la pratique.

Loin de moi la pensée de nier les avantages de ces méthodes nouvelles. Ce que j'essaierai de démontrer, c'est qu'aucune ne peut se passer de la méthode médicamenteuse. Toutes doivent avoir recours à elle si elles veulent donner des résultats appréciables.

Nous n'arrivons pas à comprendre la prétention de guérir en une seule séance une dent infectée, même atteinte de lésion périapexienne, c'est-à-dire, dans un nombre de cas, d'une lésion osseuse. On nous répond qu'en effet la lésion ne peut être guérie, mais qu'elle est placée dans des conditions favorables pour une guérison lente mais certaine.

Nous répondrons de suite à cela qu'il est dangereux de généraliser une telle méthode. Toutes les dents infectées ne présentent pas les mêmes complications au niveau de la région périapicale. Des cas cliniques différents exigent et demandent des traitements différents.

Cliniquement, la dent infectée peut présenter les cas suivants:

1^o Ou bien la dent infectée n'a jamais donné naissance à une réaction inflammatoire;

2^o Ou bien la dent infectée a donné naissance à des manifestations inflammatoires, véritables poussées congestives qui durent quelques jours pour ensuite disparaître (granulomes, kystes);

3^o Ou bien la dent infectée a provoqué des manifestations inflammatoires aiguës avec formation de collection purulente (abcès alvéolaire, fluxion);

4^o Ou bien la dent infectée, après quelques poussées congestives, donne naissance soudainement, sans provoquer de douleur, à un écoulement purulent (fistule);

5^o Ou bien la dent infectée ne constitue qu'une réinfection après traitement.

Il nous apparaît extraordinaire de lire que toutes ces dents atteintes de lésions apicales, allant de la simple infection à celle de la lésion osseuse bien déterminée, puissent être traitées par une même méthode et rapidement.

Nous préférierions entendre dire que, par prudence, dans la crainte de commettre une erreur, on s'attarde un peu plus dans certains cas, mêmes simples.

Mais, qu'est-ce qu'une dent infectée? C'est une dent dont la pulpe, pour des causes diverses, après avoir subi l'assaut de microorganismes a perdu toute vitalité physiologique. Le tissu organique avec ses prolongements radiculaires (filets nerveux) est devenu la proie des bactéries. Après une résistance plus ou moins prolongée, le tissu pulpaire est le siège de décomposition et de putréfaction. Les microorganismes de saprophytes sont devenus pyogènes: c'est la *gangrène pulpaire* avec ou sans réactions inflammatoires.

Avec cette décomposition et cette putréfaction on peut affirmer que le canal est infecté sur toute sa longueur. Le canal devient une cavité close dans laquelle la flore microbienne trouve d'excellentes conditions pour son développement. Mais l'infection ne se limitera pas aux parois du canal, elle se propagera. La masse dentinaire est traversée de canalicules qui contiennent des fibrilles (tissu organique) susceptibles d'être, à leur tour, décomposés comme les filets nerveux dont ils sont les prolonge-

ments collatéraux. Par son ouverture apicale, le canal communique avec une région anatomique bien définie, l'infection radiculaire s'y propage dès le début et y provoque des complications plus ou moins graves. Nous ajouterons l'existence de canaux aberrants, particulièrement nombreux dans la région apexienne, et dans lesquels on rencontre des véritables filets nerveux inaccessibles.

Donc, quatre foyers d'infection: le canal proprement dit, la masse dentinaire, les canaux aberrants, la région périapicale.

Le but essentiel de toute thérapeutique quelle qu'elle soit (médicamenteuse, mécanique, par agents physiques) sera d'atteindre l'infection dans ces quatre régions. C'est là que réside toute la difficulté de l'opération. Une seule région non atteinte et nous assistons impuissants au réveil de l'infection et c'est la *réinfection du canal radiculaire et de la zone périapicale*.

Le but recherché, c'est la stérilisation de ces quatre régions. Nous ne nous dissimulons pas les difficultés que nous rencontrons, nous ajoutons même que nous nous trouvons souvent en présence d'impossibilités. Nous ne cherchons nullement à faire croire que le but est facile à atteindre. C'est précisément parce que nous nous trouvons chaque jour en présence de ces difficultés que nous insisterons sur la nécessité d'atteindre l'infection aussi loin que possible, nous augmenterons ainsi nos chances de succès au lieu de les diminuer.

Il n'est pas dans nos intentions de développer, devant vous tout le traitement de la dent infectée. Notre ambition sera d'insister sur quelques phases de ce traitement comme nous l'avons fait en d'autres occasions.

La première chance de succès du traitement, c'est d'éviter tout refoulement vers l'apex et au delà des matières septiques contenues dans le canal. Avant toute intervention dans le canal, il est indispensable de neutraliser ces matières septiques. Le canal radiculaire est le siège de pullulements microbiens, tandis que la région périapicale n'est infectée que par propagation, par infiltration. Si le filet nerveux est décomposé, les tissus de la région périapicale ne le sont pas, sauf dans les cas de complications.

Le premier acte de toute thérapeutique médicamenteuse sera, contrairement à ce qui se pratique encore couramment, de placer sous obturation hermétique ces débris pulpaire radiculaires au contact d'un antiseptique. Dans cette technique, nous n'avons fait qu'adapter les idées émises depuis longtemps par Buckley sur la décomposition chimique des tissus pulpaire et de l'action du formo-crésol.

Deux précautions doivent être observées:

1^o A la première séance, interdiction absolue de toucher au contenu des canaux radiculaires;

2^o L'obturation hermétique sera faite avec une pâte molle, l'eugénate de zinc, à l'exclusion du ciment temporaire et de la gutta qui exigent une pression pour leur mise en place. Nous devons éviter toute compression sur le contenu semi-liquide du canal.

Ce pansement antiseptique comprendra un coton imbibé de tricrésol seulement, pas de formol. Depuis quinze ans, nous employons le tricrésol non associé à un autre antiseptique. Nous avons exclu le formol parce que trop irritant pour les tissus périapicaux et susceptible de donner naissance à des réactions inflammatoires graves. Sur ce point nous avons été heureux de nous trouver d'accord avec Blayney qui, dans la dernière édition de son traité de thérapeutique paru il y a quelques mois, écrit:

"Si le formol en solution est trop irritant pour être employé en chirurgie dans des pansements externes, une solution de 50% serait certainement beaucoup trop irritante pour être placée dans une dent sous obturation hermétique. Puisque nous possédons de nombreux autres produits ayant un pouvoir antiseptique suffisant, qui ne sont pas irritants et ne mettent pas les tissus périapicaux en danger, il n'y a pas de raison de continuer son emploi (du formol) dans le traitement radiculaire."

On nous objectera que l'obturation hermétique, dès la première séance peut con-

situer un danger grave provoquant des complications inflammatoires. Nous n'avons pas la prétention d'apporter ici une méthode omnibus. Des réactions inflammatoires, nous en avons observées, mais nous n'avons jamais incriminé l'action du pansement hermétique. L'insuccès est dû soit à une mauvaise technique, et nous y insistons, soit à l'état pathologique du périapex et, dans ce cas, on peut faire un diagnostic certain de lésion périapicale infectée avec destruction osseuse (granulome-kyste) qui sera confirmé par la radiographie. Il faudra alors envisager, ou bien un traitement très long et parfois incertain, ou bien l'intervention chirurgicale avec curettage, résection apicale ou encore l'avulsion.

Dans les séances suivantes, après cathétérisme progressif du canal, on pratiquera sa désinfection à l'aide d'antiseptiques volatils et diffusibles que nous possédons, à l'exclusion du formol.

Nous abordons maintenant la question de l'élargissement des canaux. Question qui paraît si simple, et pourtant des fautes graves sont commises. Tous les canaux doivent être trouvés. Ne décrétons pas à la légère que les canaux qu'on ne trouve pas sont calcifiés. Nous vous répéterons ce que notre maître Roy nous disait lorsque nous étions étudiant: "Un canal qu'on ne trouve pas, est un canal qu'on cherche là où il n'est pas."

La grande erreur est de vouloir élargir un canal avec des moyens mécaniques. Il y a là une source de dangers et notamment celui de refouler des matières septiques au delà de l'apex. L'élargissement mécanique doit suivre l'élargissement chimique (bioxyde de sodium-acide sulfurique). C'est par la décomposition chimique des parois du canal qu'on doit atteindre l'apex. C'est le seul moyen, il n'y en a pas d'autre. Pour ne pas perdre la direction des canaux qui ne sont pas toujours rectilignes, c'est le seul moyen d'éviter l'amorce d'un-faux canal, c'est le seul moyen de ne pas obturer prématurément la lumière du canal avant d'avoir atteint l'apex, c'est aussi le seul moyen, et cela a son importance, de ne jamais briser un instrument.

Un autre grand avantage de cet élargissement chimique, c'est d'obtenir en même temps la stérilisation des parois radiculaires.

La direction du canal ainsi obtenue, on peut, à ce moment, employer tous les moyens mécaniques. Nous donnons la préférence aux limes à canaux. Ce sont des instruments très souples qui épousent facilement la courbure du canal. Nous ne rejetons aucun moyen, nous essayons de les associer d'une façon rationnelle. Ce qu'il faut obtenir c'est une communication franche entre la région périapicale et le canal. C'est le seul moyen d'éviter la réinfection.

Quels sont les moyens que nous possédons pour obtenir ce résultat?

1° L'emploi d'antiseptiques diffusibles-volatils pouvant agir à distance;

2° Préparer et exciter le processus réparateur biologique.

Nous avons à notre disposition un grand nombre d'antiseptiques, tous ont été essayés avec plus ou moins de succès. Les antiseptiques volatils à pénétration profonde ne doivent pas être caustiques, ils doivent agir, en les détruisant, sur les bactéries, mais ne jamais atteindre les cellules saines des tissus sur lesquels ils agissent. Nous avons pu remarquer que l'emploi trop prolongé d'antiseptiques violents dans un canal radiculaire, près de la région périapicale, empêchait cette dernière de guérir. Le suintement du début avait tendance à persister. Le remplacement de la mèche portant l'antiseptique par une simple mèche stérile enfoncée très profondément permet de constater très rapidement l'arrêt de ce suintement. Ce n'est donc pas un écoulement purulent, mais une sérosité due à l'action destructrice de l'antiseptique sur un tissu en voie de réparation. Il y a donc là un contrôle facile du travail de régénération des tissus périapicaux.

Lorsqu'on agit sur un tissu infecté en général, on commence par le débarrasser de son infection, puis, par des antiseptiques, on essaie de lutter contre la flore microbienne; on l'abandonne ensuite pour lui permettre de guérir seul. La thérapeutique n'a fait que placer ces tissus dans une atmosphère meilleure afin d'activer leur régéné-

ration en diminuant la virulence microbienne. Pourquoi la région périapicale ne réagirait-elle pas de la même façon? Les antiseptiques volatils agiront lentement par leurs propriétés bactéricides, progressivement ils diminueront la virulence de la flore microbienne. S'ils ne guérissent pas, ils placeront les tissus dans de meilleures conditions de résistance, de défense. La stérilisation complète, n'y comptons pas, on ne l'obtiendra pas. En présence de bactéries moins violentes, les cellules se défendront mieux, les rendront inoffensifs, ou les supprimeront.

On nous objectera, avec ironie, que, dans ces conditions, il n'y a aucun inconvénient à obturer une dent infectée dès la première séance. Nous répondrons que si une plaie ouverte, vascularisée ne se guérit pas en un jour à la suite d'un pansement antiseptique, on ne peut demander une guérison plus rapide à la région périapicale infectée qui, souvent, présente une lésion osseuse beaucoup plus lente à guérir. N'oublions pas que c'est une lésion fermée qu'on ne peut atteindre que par un canal très étroit.

C'est pourquoi nous restons partisan convaincu d'une désinfection lente, progressive par des antiseptiques volatils ayant un pouvoir caustique très minime qui débarrassera les zones d'infection radiculaires (canal-tubuli-canaux aberrants) pour permettre sans réaction brutale un processus réparateur au niveau des tissus périapicaux.

L'insuccès de la méthode médicamenteuse peut donc être dû soit à une désinfection insuffisante, soit à une désinfection exagérée.

La désinfection étant obtenue, il faut maintenir le résultat acquis, c'est pourquoi on doit obturer le canal radiculaire sur toute sa longueur aussi hermétiquement que possible. Pendant longtemps, trop longtemps même, on a employé le cône de gutta qu'on enfonçait dans le canal. L'opération n'était pas toujours facile, mais on estimait que tout avait été fait.

Quelle hérésie abominable ce fut! Le canal n'était jamais complètement obturé, le cône de gutta ne s'adaptait pas aux parois. Si on le chauffait, on ne pouvait plus le placer; ce fut une illusion et que d'extrémités de cônes de gutta dépassant l'apex, blessant le péri-apex, ont ainsi créé des zones de raréfaction, de ces nombreuses zones qu'on doit incriminer à notre ignorance ou à notre maladresse. Ce cône, s'il était écrasé et obturait le canal au niveau de la chambre pulpaire, était ou libre dans le canal ou bien encore réduit en forme d'accordéon. Ce cône de gutta si ingénieux n'a donc jamais obturé un canal; de plus, il l'obturait dans des conditions d'asepsie plutôt douteuse. Il n'était jamais stérilisé; il était fait d'une matière putrissable.

Aujourd'hui, l'unanimité des praticiens est partisan d'une obturation complète et pour cela nous en sommes resté à la pâte que nous n'avons jamais abandonnée, puisque nous n'avons jamais obturé un canal avec un cône de gutta.

L'obturation doit être faite avec une pâte légèrement antiseptique qui ne comprendra aucun produit caustique. Grâce à l'instrument ingénieux imaginé par Lentulo, nous pouvons obtenir une obturation hermétique et complète, mais toute technique nouvelle apporte ses déboires. Obturation complète, oui, obturation exagérée, non! Ce que nous recherchons, c'est une stérilisation sans action sur les tissus périapicaux. Avec une pâte antiseptique remplissant toute la lumière du canal, la réinfection ne peut venir ni du canal, ni de la masse dentinaire, ni des canaux aberrants.

Puisque nous cherchons à rendre à la région apicale sa vie propre et lui permettre de se régénérer par ses propres moyens, l'obturation trop hermétique avec débordement de la pâte au niveau de l'apex paraît dangereuse et inutile. Les tissus périapicaux ne peuvent que souffrir de cette présence continuelle d'un antiseptique. L'encapsulation de l'apex est inutile dans le cas de lésion étendue, dangereux s'il n'y a pas de lésion; des phénomènes d'arthrite très tenaces ont pu alors être observés.

Il y a un point sur lequel on n'insiste pas suffisamment, c'est la réinfection provenant de la chambre pulpaire.

Dès que l'obturation du canal a été réalisée, il faut l'isoler du milieu extérieur. Des infiltrations peuvent se produire sous une obturation et même sous une couronne

dissolvant ainsi la pâte radiculaire. Ce fut là le grand argument des partisans du cône de gutta contre les pâtes antiseptiques. Pour éviter cette réinfection venant de l'extérieur, il suffit dès que le canal a été obturé de remplir la chambre pulpaire avec du ciment à l'oxyphosphate. Lorsqu'on aura une couronne à poser, compléter par un amalgame qu'on insérera dans le ciment mou. On évitera ainsi toute infiltration venant de l'extérieur.

* * *

J'en ai terminé avec ce trop long exposé que vous connaissiez déjà, et je m'excuse. Je ne vous ai pas exposé une méthode facile, elle exige beaucoup de soins, de patience, de temps. Elle évolue continuellement; si elle n'est pas rapide, elle réussit pourtant à sauver, chaque jour, des dents précédemment vouées à l'avulsion.

Trop partisan du progrès, j'attends toujours d'une nouvelle méthode des améliorations.

Je dois avouer que j'ai peur de la rapidité, parce qu'elle est trop souvent la caractéristique de l'époque que nous vivons. Une méthode rapide serait souhaitable, mais, en dehors du côté économique, il faut aussi satisfaire le côté scientifique. Il faut éviter que des méthodes trop rapides ne permettent, dans quelques années, aux théories avulsionnistes de reprendre corps.

Il faut que la méthode du traitement des dents infectées puisse permettre une régénération lente, peut-être, mais certaine, du péri-apex et éviter toute réinfection radiculaire.

LES INDICATIONS DU TRAITEMENT ET DE L'OBTURATION DES CANaux INFECTES EN UNE SEULE SEANCE

par H. LENTULO,

Chef de Clinique à l'Ecole Dentaire de Paris.

Cette communication se rapporte à un sujet que j'ai eu l'occasion de développer une première fois, il y a deux ans, et tout dernièrement, à la Société d'Odontologie de Paris.

Pourquoi proposer une thérapeutique radiculaire à cadence rapide, consistant à obturer un canal, autant que possible aussitôt son ouverture achevée, réalisant ainsi un traitement basé uniquement sur des moyens mécaniques?

La réponse a une triple base et un aspect, à mon avis, tout ce qu'il y a de plus classique.

La brusquerie apportée à l'achèvement de l'opération a, comme premier motif, une raison biologique. Deuxièmement un avantage thérapeutique, et enfin une raison d'ordre social qui pourrait n'avoir rien à faire dans une discussion scientifique, mais qui s'impose malgré nous et de toutes façons.

Les raisons biologiques? Elles sont banales: Elles se réfèrent au système de défense, naturel à l'organisme, face aux agressions microbiennes ou toxiques. Système de défense aussi bien organisé vis-à-vis des apex qu'en toute autre région.

Cette défense est agencée sous l'aspect d'une série de barrières. Une barrière active spécifique constituée par les antitoxines et la phagocytose. Des barrières passives générales telles que: scléroses, enkystements, lyses, fistules ou processus d'élimination. Mais l'action antitoxique et phagocytaire constitue la défense la plus vigilante et la plus efficace.

Depuis longtemps les histologistes, et particulièrement G. Delater, ont montré les divers leucocytes présents dans les granulomes. Leur présence prend dans ses coupes, généralement, une forme de barrage, de moins en moins dense à mesure que l'examen approche de l'apex infecté et, on en trouve plus dans l'orifice apical où siège l'élément septique permanent.

En effet, le leucocyte — cellule migratrice — ne peut remplir son rôle et subsister que dans le tissu vivant, sur *terrain vivant*. Aussi son action s'arrête à la limite du tissu mortifié, désorganisé.

Dans le cas qui nous occupe, nous savons donc que jamais aucune défense naturelle spécifique ne s'exerce à l'intérieur d'un canal dont la pulpe est mortifiée.

Ainsi, si dans la constatation de la présence d'un polynucléaire autour de l'orifice apical on est en droit d'en déduire un état infectieux, il convient aussi de tirer les conséquences du fait que le canal à pulpe mortifiée n'est jamais le siège d'une défense naturelle: c'est ce que l'on a fait jusqu'à présent par le double souci de stériliser le canal, par des moyens chimiques ou physiques, et de finir par l'obturer. Cependant, je pense que, actuellement nous pouvons ne tirer qu'une seule conséquence: *Supprimer le canal*.

Seule la vacuité du canal est à l'origine de la maladie; cette vérité est d'une banalité vieille comme notre profession. Ce qui n'a pas été assez dit, c'est que, du point de vue biologique, l'organisme a les armes nécessaires pour phagocyter un à un les microbes *issus du canal, mais ne peut rien pour livrer la lutte à l'intérieur du canal*. Cette notion — *uniquement cette notion* — rend compte de la nécessité, universellement admise, d'obturer le canal (c'est-à-dire de le supprimer) et amène à penser que cela seul importe.

J'ai dit aussi que le deuxième point de la proposition contient une indication thérapeutique, un avantage certain à brusquer les phases du traitement et à arriver le plus rapidement possible à l'obturation du canal. (Réserves faites pour quelques cas cliniques sur lesquels je reviendrai tout à l'heure.)

Voyons, un peu sommairement, comment les choses se passent selon les méthodes classiques enseignées du traitement des dents à canaux infectés: ouverture de la dent; pénétration dans la chambre pulpaire; recherche de l'orifice du canal; pénétration de celui-ci par des sondes. Ici les recommandations importantes commencent: attention au refoulement vers l'apex des débris septiques; n'avancer que doucement, au besoin de séance en séance, au fur et à mesure de l'imprégnation antiseptique du canal: Et enfin on arrive à l'apex.

A ce moment commence le traitement de désinfection par divers moyens physiques ou chimiques. Chaque école, chaque opérateur a sa formule. Quelle qu'elle soit, à un point donné, une mèche de coton, porteuse de médicament ou non, est mise en place sous un pansement occlusif.

Quelquefois la dent en traitement a déjà réagi douloureusement avant le pansement occlusif; quelquefois elle ne réagit ni avant le pansement ni après; quelquefois aussitôt la dent sous pansement occlusif tout se met en ébullition. Le débouchage, c'est le calme; la réobturation temporaire, c'est la crise et ça dure. . .

Il a été donné une explication par le fait d'une virulence exaltée de l'infection en vase clos. Quelquefois aussi, certains signes cliniques permettent d'attribuer la réaction douloureuse aux irritations médicamenteuses.

Eh bien, je crois que si la réaction douloureuse est absente après un pansement occlusif c'est que ce pansement n'est occlusif qu'en apparence et non réellement; ou bien, ce qui n'est pas rare, loin de là, c'est que l'apex est naturellement bouché.

Au cours du dernier Congrès de l'A. F. A. S., j'ai pensé qu'il pouvait être intéressant de montrer au moins une forme du mécanisme qui commande l'irruption des produits septiques ou médicamenteux au delà de l'apex. J'ai montré qu'en présence d'une dent à chambre pulpaire et canal vides, mais dont l'orifice d'entrée coronaire est rigoureusement obturé, tout se passe comme si on avait affaire à un vase d'expansion dont l'orifice apical serait l'issue du trop-plein.

A l'occasion du moindre changement de température du milieu buccal, à l'occasion de l'arrivée d'une boisson fraîche ou chaude, le volume d'air inclus dans la chambre pulpaire et le canal se contracte ou se dilate, aspirant dans le canal, — dans le cas de contraction —, les produits liquides disponibles autour de l'apex (sérum, sang,

pus) qui pourront être réexportés quelque temps après, à l'occasion d'une arrivée de boisson chaude autour de la couronne.

Et n'oublions pas que le séjour — quelques heures — d'une sérosité dans le canal suffit pour y transformer les albumines en produit de décomposition extrêmement toxiques pour l'organisme, qui ne les recevra pas sans des réactions dont la douleur n'est qu'une manifestation.

Que ce soit une albumine dégradée, un médicament caustique ou des toxines microbiennes, le résultat sera toujours une irritation entretenue du péri-apex, avec l'hyperhémie et ses conséquences.

Il me paraît raisonnable de penser que sous pansement occlusif ce résultat est difficilement évitable.

En effet, par une expérience très simple, on peut montrer l'effet prévu de la façon suivante. Une dent extraite est vidée de sa pulpe jusqu'à l'apex; par l'*orifice apical* est introduit un tube de verre capillaire dans lequel on a fait pénétrer une sorte d'index liquide quelconque coloré; ce tube est scellé et fixé en place par une goutte de cire résineuse autour de l'orifice apical. D'autre part, après avoir *fermé rigoureusement l'ouverture de trépanation coronaire* réalisant ainsi l'occlusion parfaite de la chambre pulpaire, (ce qui n'est pas toujours facile avec du ciment) on s'aperçoit qu'il suffit de saisir la dent du bout des doigts pendant un instant pour que la chaleur, transmise à travers la couronne, mobilise largement l'index coloré du tube capillaire.

On a réalisé ainsi une sorte de thermomètre à air extrêmement sensible qui, dans la réalité clinique, est une vraie machine à infecter l'apex indéfiniment.

Il est facile de penser, par extension, que ces variations de pression peuvent ne pas être uniquement extrinsèques et que *même avec un orifice de trépanation ouvert* le canal puisse se vider par l'apex avec des allers et retours incessants (Effets de succion, états congestifs, hyperthermie, suivis de retours à la normale). Cependant, cette deuxième possibilité me paraît loin d'être aussi effective que la première, mais l'une et l'autre suffisent à expliquer pourquoi, dès le jour où je me suis permis de commencer la série d'essais sur l'obturation du canal aussitôt que son ouverture et nettoyage sont achevés, l'absence de réactions incidentes a presque toujours été la règle.

Cette série est déjà longue et s'augmente tous les jours. Les constatations cliniques et les contrôles par épreuves et contre-épreuves radiographiques (les premières correspondant à l'idée de ce travail datent de six ans) m'autorisent à avancer cet axiome: que dans le traitement des canaux infectés *seule compte l'obturation du canal, rapidement*.

Cependant il y a des CONTRE-INDICATIONS. Il y en a deux importantes.

(à suivre)

Le docteur Jules Thébaud

Il nous fait plaisir de porter à la connaissance de nos lecteurs que notre sympathique confrère, le docteur Jules Thébaud, vient d'être appelé par Son Excellence le Président de la République d'Haiti, à la direction générale du Service National d'Hygiène et d'Assistance Publique et Sociale de son pays.



Mount Edith Cavell (11,033 feet) from the highway.
(Inset) Approaching the summit of Mount Edith
Cavell, Jasper National Park.



*Photo courtesy Metropolitan Printing
Company, Edmonton, Alberta.*



DR. STANISLAS GAUDREAU,
Québec, P.Q.

Professeur agrégé de la faculté de médecine de l'Université Laval.
Licencié en chirurgie dentaire du Collège des Chirurgiens Dentistes
de la Province de Québec 1895.

Docteur en chirurgie dentaire de l'Université Laval 1922.
Ex président de la Société d'Odontologie de la Province de Québec.
Membre fondateur et ex président de la Société Provancher d'Histoire
Naturelle du Canada.

Membre fondateur de la Société de Stomatologie de Québec.
Président du premier Congrès des Dentistes de Langue Française de
l'Amérique du Nord 1928.

Docteur en chirurgie dentaire, honoris causa, de l'Université de
Montréal 1935.

Chargé de clinique dentaire à l'Hotel-Dieu, pour les étudiants en
médecine.

Practical Occlusion for the General Practitioner

by W. J. LINGHORNE, D.D.S., New Liskeard, Ontario

DURING the past twenty years, our leading clinicians and writers have stressed the effects of malocclusion in the fields of periodontia, crown and bridge, partial and full dentures. Various techniques for obtaining occlusal harmony have been advanced and taught by leading authorities on the subject. Occlusal harmony is now accepted as fundamental for the success of any work or treatment in these fields of dentistry.

Most dental practitioners agree that if the occlusion is neglected, the treatment of periodontal disease is, in most cases, of a temporary nature only. The importance of the occlusion in restoring missing teeth by bridgework is well known. It is equally important when teeth are restored in the natural dentition by partial dentures. In the full denture field, most dentists are aware of the troubles caused by occlusal disharmony.

In spite of its importance, it is estimated that only a very small percentage of the profession even attempt to equilibrate an occlusion in the natural dentition, other than to relieve a few places of obvious trauma. Consequently—

(1) Four out of five adults over thirty years of age have periodontal disease, and to most of these the profession is able to give only temporary relief. (2) Perio-

dontal disease is responsible for the loss of fully one half of the teeth lost from all causes. (3) More important still, many of our patients have, in their mouths, foci of infection that may at any time cause serious systemic disturbance.

When constructing bridges and partial dentures, we are still dealing with the occlusion of the natural dentition:—We are restoring missing parts to it. If the dentist does not understand the problem of occlusion in the natural dentition, he is in the same position as a mechanic supplying parts to a moving machine without knowing how that machine works. A moment's reflection enables one to see that many disturbances and troubles result from such a method of procedure. As a result, many of our restorations are not as comfortable as they might be, and give service for far too short a time. The specific troubles encountered in this field, because of occlusal neglect, will be given more detailed treatment in a later section. In the full denture field it is estimated that approximately ninety percent of full dentures are constructed without regard to obtaining occlusal harmony. We have all been told many times, of the troubles resulting from this neglect.

What is the reason for this apparent neglect of such an important phase of

dentistry? The writer has faith in the members of his profession and believes that, though many men would like to do this work, they are unable to do so for either technical or economic reasons. On the other hand pressure is continually being exerted on us—the medical profession is becoming more and more insistent that the mouth be made free of foci infection; the public, realizing that an unhealthy mouth is a menace to the general health, are demanding that we keep their mouths healthy without loss of their teeth, and our own leaders are urging us to undertake this work and are warning us of the troubles that follow its neglect. The only answer to this is the development of a technique of occlusal equilibration practicable for the average dentist and within the means of the average patient.

In his student days, through the influence of Dr. H. K. Box, professor of Research and Periodontia at the University of Toronto, the writer became interested in the treatment of periodontal disease and of necessity, in occlusion. However, early in his practice he found he was unable to equilibrate an occlusion satisfactorily by the methods then taught. Since then, he has sought to evolve a method of procedure which would fulfil the two requirements stated above. But before doing so, he found it imperative to re-examine the whole subject and to explore the basic aetiological factors of the disease since it was obvious that the present known facts were insufficient to establish a firm foundation for the development of a sound therapeutic technique. As a general practitioner, naturally, he applied the lessons learned in the study of occlusion in periodontia to the crown and bridge, partial and full denture fields.

Accordingly this paper, which is written for the general practitioner in the hope that he may gain a practical working knowledge of the subject, deals with the

causes and treatment of occlusal disharmony in its relation to periodontal disease and then applies the principles learned to the crown and bridge, partial and full denture fields. The reasoning for the establishment of the basic principles involved will be given, followed by definite techniques that can be taken to the chair and followed step by step. But no reference will be made to abnormal or difficult cases, nor will any attempt be made to give the finer details that will enable the operator to get as nearly perfect results as possible since this skill can be developed only after the operator has a basic knowledge of the subject and some experience in occlusal equilibration. All techniques given are being used and have been found practical in a large general practice with moderate fees.

To the man who associates the terms traumatogenic occlusion, traumatic occlusion, occlusal equilibration or adjustment, harmony in the occlusion, with periodontia, and who, because he does not wish to treat periodontal disease, sometimes asks why he should study occlusion, it should be emphasized that a knowledge of occlusion is essential in all branches of dentistry, whether orthodontia, operative or prosthetics. Moreover this knowledge will give him a new conception of these subjects and will enable him to improve his work, save time and avoid much of the "grief". In fact, the Hall Research Group advanced the premise "that occlusion is the basis of the practice of dentistry."¹

THE RELATIONSHIP OF THE OCCLUSION TO THE DEVELOPMENT AND HEALTH OF THE SUPPORTING TISSUES

It would be well for the dentist to be quite clear in his mind why the occlusion has such an intimate relation with the health of the periodontal tissues. It is a medical axiom that the function of any organ or tissue is a fundamental factor in

W. J. LINGHORNE

its development, health and resistance to disease.

Let us consider the application of this axiom to our subject. The masticatory machine like any other machine can be divided into three parts:—

(1) Power to run the machine—the muscles of mastication.

(2) Working surface or tool—the occlusion or articulation.

(3) Foundation to sustain the power used at the working surface—the periodontal tissues.

Thus, the primary function of the periodontal tissues is to sustain the power used on the teeth when chewing. But, since the occlusion may vary this function from normal in three ways:

(1) No function at all.

(2) Under-function.

(3) Over-function, which is traumatogenic function, it is evident that the occlusion determines the function and is therefore a decisive factor in the development, health and resistance to disease of the periodontal tissues.

Box has shown microscopically the influence of function on the structure of the periodontal membrane:

(1) In teeth having no function a section of the periodontal membrane is

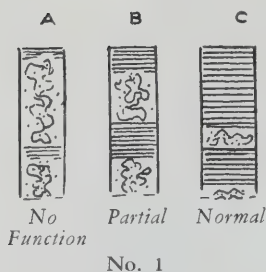


narrow, showing poor fibre development with a large amount of indifferent tissues. (See Sketch 1-A).

(2) Sketch 1-B shows a section of the membrane of a tooth in partial function. The membrane is wider, showing more fibre development and less indifferent tissue.

(3) Sketch 1-C shows a section of a tooth in normal or as Box terms it, heavy function. The membrane is still wider, showing still greater fibre development with very little indifferent tissue. This would be able to withstand much more stress without being traumatized and would be more resistant to disease than the membrane shown in 1-A and 1-B. Incidentally, the bone receives much of its functional stimulation from the pull of the periodontal fibres which are embedded in it.

An unbalanced occlusion affects the development, health and resistance of the periodontal tissues by producing either



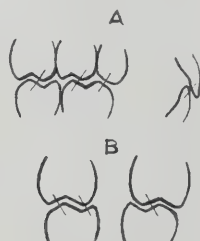
insufficient or incorrect functional stimulation, or by causing trauma through over-function.

The problem then in occlusal equilibration is not only the negative one of eliminating trauma, but also the positive one of establishing normal function in the periodontal tissue. Box⁴ states this view quite clearly in his recent book. The writer has also discussed it in more detail in a previously published paper².

A REVIEW OF THE CAUSES OF TRAUMA IN TRAUMATOGENIC OCCLUSION

Individual Loading:

Other than opening the closing, the masticatory apparatus is capable of three main functional movements,—protrusive, right and left lateral. A perfect articulation functions as follows:— In the protrusive bite the teeth slide forward in the planes marked in Sketch 2-A. It can readily be seen that if one tooth or cusp



becomes high in the dentition, that tooth will sustain the whole weight of the bite, causing trauma in its supporting tissues. This condition, also occurring in the

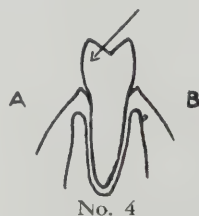
lateral movement, Sketch 2-B is known as individual loading as distinguished from collective loading, a term used when the teeth engage simultaneously and glide together in the functional movements of the jaw, giving each tooth its share of the load.

Oblique Loading:

A force applied in the direction of the long axis of the tooth is transmitted through the periodontal membrane to the bone and on account of the conical shape of the root, is distributed equally over



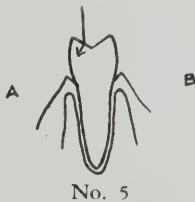
the whole surface of the supporting bone. This is *axial loading*. (See Sketch 3). A force applied in a direction other than that of its long axis is transmitted through the periodontal membrane in such a manner that it is sustained by only a



small part of the surface of the supporting bone. The tooth acts as a lever with its fulcrum at A. This will be referred to as *oblique loading*. (See Sketch 4). In axial loading approximately the whole surface of the supporting bone and periodontal membrane sustains the force of the muscles of mastication; while in oblique loading, only a small fraction of the surface of the supporting bone and membrane sustains the same force. Trauma is caused by the overloading of the tissues

at this point (usually the alveolar crest) with the subsequent breaking down of the bone at the point of overloading. At "A" there is a compression of the membrane, while at "B" there is a stretching of the membrane. Both cause trauma.

In Sketch 5, note that a force applied to the tooth in the direction of its long axis is transmitted to the bone in a direction at right angles to the occlusal surface of the tooth. This changes axial loading to oblique loading.



No. 5

In Sketch 6, with a comparatively flat tooth, force applied is similarly transmitted to the bone at right angles to the occlusal surface. This changes oblique loading to axial loading.



No. 6

Sketch 7 shows that the load becomes more axial in character as the angle of the cusps is reduced. The load is sustained by the smallest area of the support-



No. 7

ing membrane and bone when the load is applied at right angles to the long axis of the tooth. The size of the supporting

area increases as the direction of application of the load approaches that of the long axis, until in axial loading the maximum area of supporting membrane and bone sustains the load.

Summary:

(1) Individual loading of teeth causes the load of the bite to be sustained unequally; the supporting tissues of one tooth receive more of the load than the supporting tissues of another.

(2) Oblique loading also causes unequal distribution of the load, one part of the sustaining membrane and bone receiving more of the load than another part.

(3) Therefore, in order to avoid trauma in some area of the supporting tissue and to give proper functional stimulation to the other areas, the ideal is to have equal distribution of the load over the whole area of the supporting tissues.

Accordingly, the first fundamental principle in any technique of occlusal equilibration is to abolish individual loading and to start the trend toward axial loading. Avoid all possible side pressures on the teeth.

THE MANNER IN WHICH THE MASTICATORY APPARATUS WAS DESIGNED TO FUNCTION

Before attempting to make any change in the occlusion, one should know how the masticatory apparatus was designed to function. Undoubtedly it was designed to:

- (1) Bite off or tear off food (anteriors).
- (2) Crush food (bicuspid).
- (3) Chew food (molars).

For various obvious reasons, the crushing action will be disregarded, and for the purpose of occlusal equilibration, the masticatory apparatus will be considered designed for two purposes:

- (1) Incising food.
- (2) Masticating food.

But how does the masticatory apparatus actually function? In an effort to discover this, the writer observed over one thousand people and came to the following conclusion:

FIRST: A portion of the food is bitten off; this is accomplished by the anteriors closing in an end to end position and then shearing the piece off by sliding back to centric. Only the anterior teeth function in this action.

SECONDLY: The portion of food is then masticated by the posteriors. The jaw closes in the eccentric position, incises off a morsel of food advanced by the cheek, and obtains a shearing action by sliding back to approximately centric relation. The jaw opens and the action is repeated. The muscles of the cheek and tongue introduce the food to the food table and control it while it is being suitably masticated. It is then swallowed. Thus, the masticatory apparatus consists of a co-ordination of the action of the muscles of the lips, cheeks, tongue and jaws—the whole under the control of the involuntary muscles. (It is well known that many people cannot even close the jaws in centric position when they are consciously trying to do so.)

The writer believes that the mastication is intended to be performed in the strictly right or left lateral movements and that it follows the same paths for every masticating movement. The protrusive movement is not used in the chewing function but only in the incising.

It will be noted, then, that there are two chewing paths formed by the strictly right and left lateral movements from the eccentric to approximately centric positions. When food is chewed on the left side, the left side is the working side and the right is the balancing side, and vice-versa. These two slides or paths are to be worn in gradually by abrasive action, a process which removes all interference (high cusps) or jumps in the slide until a smooth, non-interfering path is established with all the posteriors engaging simultaneously at the beginning and throughout the length of the working stroke. With the gradual wearing down of the cusps, the load becomes more and more axial. As the opposing surfaces are worn, one against the other, they co-ordinate perfectly, resulting in an efficient shearing action. (See footnote 1.)

This establishes a smooth contact-and-slide action and the load is of the pressure or impulse variety as distinguished from the impact variety. (A high spot in a filling is an example of impact, and every dentist knows how traumatic that is.) Any jump, interference or roughness in the slide causes impact or trauma.

At the same time, the protrusive or incisive slide is being similarly worn in, establishing the same type of smooth non-interfering action with all the anteriors engaging simultaneously throughout the length of the working stroke. As the lingual surfaces of the upper incisors and the labial surfaces of the lower incisors become worn, the action of the muscles of the tongue and lips keep the incisors

1. It is suggested that the jaws will always attempt to function with a shearing action if possible. If the patient is able to obtain this action in one part of the mouth, and is unable to obtain it in another part, unconsciously he will use that part (where the shearing action is possible) almost exclusively. This may be the reason for unilateral chewing. If there is too much interference in the left lateral movement and the shearing action can be better obtained on the right, the right will be used almost exclusively for chewing. To test this view, the writer equilibrated the occlusion on six patients on one side of the mouth, leaving interference in the other chewing movement. The patients were dismissed for three months and on their return all were masticating almost exclusively with the movement that allowed the shearing action. While the writer agrees that no definite conclusion can be formed from such a small number of patients, his observations in many other dentitions, both natural and artificial, seem to bear out this explanation of unilateral chewing.

in contact. As the teeth gradually wear down, they assume a more end-to-end relation (axial loading). (See footnote 2.)

If the anteriors do not wear, they gradually interfere in the chewing movement. The wear then, in the anterior region, must always be equal to, or slightly ahead of, that in the molar area so that the anterior teeth will not interfere in the lateral or chewing movements.

Summary:

(1) *Incising Movement:* The teeth that function in this movement are the anteriors. The posteriors should not interfere. By wear, a smooth-sliding, non-interfering path is worn in with all the anteriors engaging and sliding together throughout the length of the working stroke. The working stroke is from protrusive to centric and the action is a shearing one. Most of the wear on the anteriors comes in this movement, and should be equal to or ahead of the wear in the molar area to prevent the anteriors from interfering in the chewing movement. Through wear, there is a gradual transition from oblique to axial loading.

(2) *Right Lateral Masticating Movement:* The teeth that function in this movement are the posteriors, (2nd bicuspid and molars). The anteriors should not interfere in this movement. By wear, a smooth-sliding, non-interfering path is worn, with the teeth that function in the movement engaging and sliding together

throughout the length of the working stroke, which is from eccentric to approximately centric in the strictly right lateral movement. The action is a shearing one. Through wear the trend is from oblique to axial loading.

(3) *Left Lateral Masticating Movement* functions the same as the right lateral but in the opposite direction.

From this and the preceding section it may be concluded that the causes of trauma in a traumatogenic occlusion are:

- (1) Unequal loading of the supporting tissues.
 - (a) Individual loading.
 - (b) Oblique loading (side pressures).
- (2) The impact type of load as distinguished from the impulse or pressure type.

THE EFFECT ON THE OCCLUSION OF
THE MODERN DIET AND MODERN
CUSTOM OF EATING

1. *The Biting-off Function:*

Owing to the present day customs of eating food, the biting-off function is used very little. The knife and fork do most of the work. Because of this and the character of the food (lack of grit, soft foods and so on) there is very little wear on the anteriors. This results in the protrusive to centric path not being worn in, one or two teeth often carrying the whole load until centric position is reached.

2. Every dentist has observed that if a posterior tooth is extracted, the opposing tooth is extruded until it meets an opposing surface or is lost. This is sometimes referred to as tooth exfoliation. But if all the posteriors on one jaw are removed at one time, the whole periodontium moves toward the opposing jaw. It is not an extrusion but a mass movement of the teeth and supporting tissues.

These two separate actions fulfil two different purposes. The exfoliation is a natural one to get rid of a tooth, that having lost its purpose, may, through lack of function, become a menace to the host; while the mass movement is a continuous process by which nature compensates for wear.

The writer has observed that the anteriors do not have this same urge for continuous eruption—at least not to the same degree. It is his belief that the reason for this is that the anteriors, unlike the posteriors, do not compensate for wear by continuous eruption, but by the uppers moving lingually and the lowers labially resulting in a more end-to-end relation (axial loading). This premise should relieve concern regarding normal wear closing the bite.

The writer has found the application of this principle useful in orthodontia.

The slide, instead of being smooth, is rough and bumpy. A moment's reflection shows, that all the causes of trauma are now present in the working stroke with the results we all know. There is individual, oblique and impact type of loading. The fact that the two opposing surfaces do not co-ordinate, interferes with the efficiency of the shearing action.

2. While the knife and fork have taken over most of the incising function, they have not interfered, to nearly the same extent, with the masticating action. So the chewing movement is now used a great deal more than the biting-off movement. The result is that the teeth *not* in the chewing area (1st bicuspid to 1st bicuspid) receiving considerably less wear in the chewing movement than those which are used in this action (2nd bicuspid to 2nd molar) and receiving practically no wear in the incisive movement, become high and interfere in the masticating movement. This throws much of the load in the chewing movement on the first bicuspids and the anteriors, Sketch 8. As food is not chewed on



No. 8

In the chewing movement, the functional area is from "C" to "E". Therefore there is often more wear in this area than in the area "E" to "E" which becomes high and interferes in the lateral swing. The arch development due to lack of incisive function may also have a bearing in this anterior interference.

those teeth, the situation is not relieved sufficiently by wear. The interference there more or less limits the lateral slide, of necessity changing the movement to a more vertical direction. In some cases the dentition may become almost locked with a nearly vertical stroke. Thus, in-

stead of the contact-and-glide, or shearing action, there is more of a crushing action. This changes the load from the pressure or impulse to the impact type which is very traumatic and does not provide the kind of function to build strong supporting membrane and bone.

The result observed in most cases is a limited lateral slide with the laterals, cuspids and 1st bicuspids alone carrying the load of the working stroke until centric position is reached, when the molars contact. (See sketch 9.) The laterals,



No. 9

When there is separation in the molar area in the eccentric position, contact in the working slide is not made with opposing tooth until centric relation is reached.

cuspids and 1st bicuspids are in traumatic occlusion. The development of the periodontal membrane of the molars and the second bicuspids will be similar to that shown under partial function in Box's classification, given previously. The writer believes that this is the explanation of the triangular type in Box's classification of occlusions⁴. The vast majority of occlusions observed in practice today are of this type.

This interference in the chewing movement is, of course, complicated much more by various irregularities in the development of the arches, especially those which cause large over-bites such as premature loss of temporary and first permanent molars which allows the bite to close. The lack of incisive function in the development of the arches may also have some bearing in causing this inter-

ference. It must be remembered that, owing to our modern diet and customs of eating, the lateral movement is limited from childhood. From the above it can be easily understood why the vast majority of occlusions today are traumatogenic, and why pyorrhea is so rampant.

Summary:

(1) Because of our modern customs of eating, the masticatory apparatus, designed for incising, crushing and chewing, has become almost exclusively, a chewing apparatus.

(2) Since the great percentage of functional movements today are chewing movements, most of our trauma is caused and is found in this movement.

(3) As explained previously, speaking in general terms, if there is evidence of trauma in the area from first bicuspid to first bicuspid, it is generally found in the chewing movement; while, if there is evidence of trauma in the molar area, the interference in the chewing movement will often be found in the balancing bite. (See footnote 3.)

WHAT THEN IS THE TASK OF THE DENTIST TODAY?

FIRST: He must free the two chewing slides of interference and make two smoothly-sliding chewing paths with as many as possible of the teeth that function in each movement carrying the load of the bite throughout the whole length of the working stroke. (The chewing movement is the strictly right or left lateral movement from eccentric to approximately centric.)

3. It is suggested that with normal, correct wear which eliminates interference, the wearing down of the cusps gradually allows the working stroke to lengthen. The working stroke does not stop at centric relation but gradually lengthens to glide over the buccal plane of the upper lingual cusp which is often called the balancing plane (Buccal plane of the upper lingual cusp and the lingual plane of lower buccal cusp.) This so-called balancing plane is then part of the working stroke and is worn in on the working side when food is between the teeth.

If the slide is limited by interference, and the height of the cusps is not reduced by wear, the working stroke ends at centric relation. The so-called balancing plane is, therefore, not reduced sufficiently by wear and often interferes with the working stroke of the opposite side,

SECOND: And second in importance—he should establish a similar biting-off path. This path is from protrusive to centric. The writer is aware that the biting-off movement may vary laterally but does not consider it of sufficient importance, in most cases, to warrant special attention. In fact, he has observed many times that teeth that interfere in the biting-off movement but not in the chewing movement, “stand up” for years without showing signs of trauma. In his own mouth he has purposely left a lower central interfering in the protrusive slide, but not in the lateral slides, for over twelve years. It does not show any signs of trauma yet.

Summary:

Occlusal equilibration consists then of adjusting (1) Two chewing slides, and (2) A biting-off slide.

(1) *Chewing Slides:* The load must be carried on the posteriors which engage and slide together throughout the length of the working stroke. The anteriors must be ground so as not to interfere in the chewing movements. Care must be taken to see that no interference comes from the balancing bite. When grinding the occlusion, the operator must remember to decrease oblique loading or side pressures and to increase axial loading.

(2) *Biting-off Slide:* The posteriors should not interfere in the biting-off slide. (In most cases today they do not.) Then a smoothly-sliding, protrusive-to-centric slide should be established with as many of the anteriors as possible carrying the load throughout the length of the stroke.

BASIC METHOD OF ADJUSTING THE THREE SLIDES

Thus far, it may be inferred that all that is necessary to equilibrate the occlusion in the chewing movements (which is the main task) is to grind the anteriors and first bicusps slightly but evenly out of occlusion for the full length of the working-stroke similarly to remove interference with a stone in the balancing-bite and then to have the patient grind in the desired, smoothly-sliding working stroke by the use of a chewable, abrasive material, described in a later section.

The writer agrees that, in many cases, this is all that is necessary to establish normal function, and that if a dentist goes no further than this in studying and applying the technique of occlusal equilibration, he will still be doing a great deal for many of his patients. But if he will go a little further he will obtain better results as certain factors, some of which are enumerated below, may not be taken care of by this method:—

(1) Each tooth, by the method outlined above, gets equal wear with its opponent, but some teeth may require more re-shaping of the cusps than their opponents to establish axial loading.

(2) Loosened teeth interfere with abrasive action. A little judicious grinding with a stone lessens the amount of grinding-in necessary. Other factors will be considered later.

Thus far in the paper the writer has given his reasons for the approach to the subject in the manner outlined above. He realizes that some dentists will work out their own technique but that some, too, will be interested in knowing the technique that he is at present using. This technique is constantly being improved.

Each chewing slide is adjusted separately, but in such a way as not to interfere with the adjustment of the other slide, because ultimately there will be only one working-stroke going one way for

the left side and going the other for the right. After adjusting the chewing slide, adjust the protrusive slide.

ADJUSTING THE RIGHT LATERAL SLIDE

The General Method (Detailed method to be treated in a later section).

(1) Grind the anteriors and cuspids slightly but evenly out of occlusion for the full length of the working stroke.

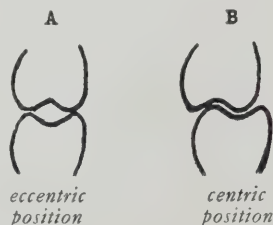
(2) Similarly remove interference in the balancing bite.

Interference is now removed from all but the functional area (the right posterior teeth). We must establish there a smooth-sliding, non-interfering occlusion with all these teeth engaging simultaneously at the start and throughout the working-stroke. The working-stroke on the posterior teeth can be divided into three parts:—

(a) The start of the stroke—eccentric position (Sketch 11 A).

(b) The end of the stroke—centric position (Sketch 11 B).

(c) The slide between.



No. 11

In most dentitions the teeth engage approximately simultaneously at the *end* of the working-stroke. If they are ground to engage approximately simultaneously at the *start* of the working stroke, the slide between can then be ground in by abrasive action. All minor inaccuracies and interferences throughout the full length of the working-stroke will be removed, and there will be ground in a smoothly-sliding, non-interfering path with as many of the functioning teeth as

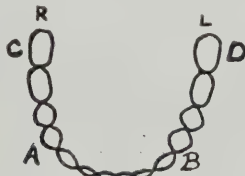
possible engaging together, and carrying the load throughout the full length of the stroke.

(3) Have the patient close at the start of the working-stroke (in eccentric position). Use a stone to grind the high tooth or teeth so that as many teeth as possible may engage approximately simultaneously in this position. The case is then ready to be ground in by the patient using a chewable, abrasive material as specified in the next section.

N.B. While the operator is adjusting interference in one place, the load may be transferred to another. Obviously he must remove the new interference before proceeding with the adjustment.

Do the next side similarly.

(This technique is illustrated and summarized in Sketch 12.) The protrusive



No. 12

Any tooth may interfere in the chewing movement. In adjusting the right lateral slide:

- 1. Remove interference in area A to B with a stone.*
- 2. Remove interference in area B to D (balancing side) with a stone.*
- 3. Adjust the working side A to C as suggested in technique.*

or biting-off slide is then adjusted using the same basic method. The anteriors are ground so that as many as possible contact in the start of the working-stroke. The smooth slide is then ground in by the patient using the chewable abrasive material.

DESCRIPTION AND USE OF THE CHEWABLE ABRASIVE MATERIAL

When the writer came to the conclusion that abrasive action was needed for equilibrating occlusions, he used various

means for getting the desired results—carborundum and glycerine, various abrasive pastes and chewing gum containing abrasive.

The abrasive pastes were not found suitable because the patient rubbed the jaws together in many directions. The patient would remain in, and follow the chewing path only when chewing something. Chewing gum containing abrasive was then used but on account of the character of the material, there was always a cushion of it between the teeth. It was then decided to develop an inert material that the teeth would pierce easily so that there would be a tooth-abrasive-tooth contact. With food the abrasive was free in the mouth and often drifted onto teeth other than used in chewing,—a desirable quality from the standpoint of the abrasive action required, but unpleasant and disagreeable from the viewpoint of the patient as it was necessary for him to be spitting continually.

Accordingly, it was decided to develop a material giving the same abrasive action as food containing grit, but without the abrasive becoming free in the mouth.

For this reason then, the material must be used wherever the abrasive action is desired. It is found that if the patient is given this material to chew, he chews it only in the second bicuspid to second molar area, but when instructed to chew it as far forward as the cuspid, he can do so. Ask the patient to exaggerate the lateral action. This has the effect of increasing the abrasive action and of grinding over, on the lingual cusp. The balancing bite is thus ground in on the working side. Advise an occasional rub backward and forward on places where interference is noticed, but warn the patient that he must give only a rub or two between chewing movements as he will wander from the path when consciously trying to move the jaw in the working-stroke. The patient chews the material,

moving it backwards and forwards from cuspid to second molar, concentrating on any place where interference is noticed.

It is found that the patient can easily grind in the protrusive slide by placing the material across the anteriors and rubbing backwards and forwards. This grinding in of the protrusive slide is accomplished very quickly.

STEP BY STEP TECHNIQUE OF OCCLUSAL EQUILIBRATION

Having tried to give the reader a basic understanding of the subject, the writer, in the following, attempts to give a technique of occlusal equilibration that can be taken to the chair and followed step by step. It is quite obvious that the technique is best taught in a clinic, but he believes that many dentists can get along quite well by following the directions.

Examination of Patient

This consists of examination of the three slides. Various other factors such as type of teeth (whether long cusp or not), type of patient (his reaction to the trauma present) and number of teeth missing are noted.

Examination of the Three Slides

(1) Have the patient close in centric relation and then slide the teeth over to the strictly right lateral position. This is the start of the working-stroke in that slide. An aid in having the patient assume this position is to place the finger on the upper first bicuspid and to ask the patient to slide over until the lowers touch the finger.

(2) Observe the number of teeth contacting in this position and the degree of separation of those that do not contact. The teeth contacting in this position are the teeth generally considered to be in traumatogenic occlusion. It is well also to observe whether the anteriors interfere or carry the load in this movement.

(3) Examine the chewing slide on the

left side (it is immaterial in the examination which side is examined first) by the same method.

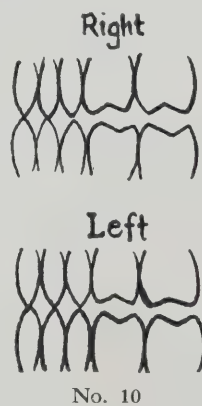
(4) Examine the protrusive slide observing the same points. Have the patient close in centric relation and slide the jaw forward until the teeth assume the end-to-end position. An aid in having the patient assume this position is to place the fingers on the upper centrals and to ask the patient to slide forward until the lowers touch the finger.

From this examination a number of conclusions may be reached even before starting the case:

(1) It will be known how many teeth can be brought into occlusion in the case by grinding, or in other words, how much the case can be improved.

(2) The amount of grinding necessary and on what teeth.

(3) After the operator has had some experience, he will know approximately how much office time the case will take.



The separation in the molar area in this case is greater on the right side than it is on the left. The adjustment would therefore usually be started on the right.

(4) He will also have some idea whether the case is easy or difficult. Often it will be observed that by grinding one or two teeth, most of the remaining teeth will come into contact in the eccentric position. The easier cases are generally

those in which the separation in the teeth out of contact in this position, is not great. Easier cases should be attempted until the operator gains experience and confidence.

Having completed the examination, the operator is ready to begin. Generally, the two chewing slides should be adjusted before the protrusive: (the slide with the greatest separation in the molar area first). Sketch 10.

Assume that the right side is farthest out of occlusion; adjust it first.

Adjustment of Right Lateral Slide

The object of the grinding with a stone is:

(a) To grind the anteriors so that they do not interfere in the chewing movement.

(b) To get as many posterior teeth (functioning in this slide) as possible engaging together in the start of the working-stroke (eccentric position).

(c) To remove interference on the balancing side.

(1) *Adjusting the anteriors* (in right lateral slide).

Grind the anteriors (centrals, laterals and cuspids) slightly but evenly out of occlusion in the right lateral movement. Check the heavy occlusion by articulating paper or by placing the tips of the fingers on the upper incisors and having the patient slide the teeth together in the chewing path. Make certain that there is no protrusive involvement in the strictly lateral movement. Grind the lingual surface of the upper and the labial surface of the lower teeth with an eye to aesthetics

and the basic principles expressed previously.

(2) *Adjusting the posteriors* (in right lateral slide).

With the aid of the finger on the right upper first bicuspid, have the patient close five or six times in the eccentric position until this position can be assumed when asked. Have the patient assume this position and then, with a stone, grind the high teeth until as many posterior teeth as possible on that side are contacting approximately simultaneously in this position (See footnote ⁴) keeping in mind the basic principles expressed previously, especially that of reducing oblique loading and increasing axial loading. The amount of grinding at one time is limited. Teeth should never be ground until they are sensitive. With proper care it is quite possible to do considerable grinding without ever making a tooth sensitive. (See next section.)

It will be often found when grinding, that no teeth are contacting on the right side. The bite is on the balancing side. Still keeping the patient closing in the right eccentric position, slip in a piece of articulating paper on the left side and locate the high spot. This will generally be in the molar area on the lingual cusp of the upper, and the buccal cusp of the lower, because in most occlusions it is found there. In most cases this is relieved at the expense of the upper lingual cusp because in most occlusions there already exists a separation between the buccal cusps in this area in the left eccentric position, which relieved at the expense of

4. There are various opinions regarding which cusps or planes should be ground, in occlusal equilibration. Owing to the irregular or abnormal development of so many dentitions, no definite rules for all cases can be laid down. Some definite principles however can be suggested. When equilibrating an occlusion the teeth should be ground,

(1) To have the load of the bite sustained as far as possible, not regionally, but equally over the whole area of the supporting surface in both the upper and lower.

(2) To have the load of the bite of the pressure or impulse variety rather than that of the impact type.

(3) To grind the teeth so that the adjustment of one chewing slide does not interfere with the adjustment of the other.

If the operator keeps this in mind, he can decide on what teeth, whether upper or lower, and on what cusps to do the grinding.

the lower buccal cusps, will increase the separation in this position. This would make the adjustment of the left lateral side more difficult. The lower buccal cusp should be reduced only when it is observed to be necessary in the adjustment of the left eccentric position. From the practical point of view the writer does not consider perfect contact on the balancing bite essential in most cases. The main thing is not to have the balancing slide interfering or carrying the load. In fact, only approximate contact is required even on the working side. The use of the abrasive material will take care of minor inaccuracies. (It is well to remember that natural wear occurs mostly at the expense of the upper lingual and lower buccal cusps.)



No. 13

The teeth are rounded as per Sketch 13, so that the cusp has the same relationship to the tooth as before.

Then adjust the left lateral slide in a similar manner.

The Protrusive Slide

Adjust this slide by grinding to have as many teeth as possible contacting simultaneously at the start of the working-stroke, which is the protrusive end-to-end position. (If the teeth are in irregular alignment the start of the working-stroke for each tooth would not be in the same position in the jaw movement. This also occurs in the lateral movements in regular posterior teeth.) Keep in mind aesthetics and reduction of oblique loading with the increase of axial loading.

At this point, contact in the start of the working-stroke and the end of the working-stroke has been attained in the

three slides. There still remains the adjustment of the slide between the eccentric and centric positions.

The Adjustment of the Slide

The patient is then asked to slide from the eccentric to centric in the right lateral. Any major interference or jumps in the slide are located. The patient will point these out with surprising accuracy. They can be located with articulating paper and relieved with a stone. Check this in the left lateral and protrusive slides. Check again on the anteriors and the balancing bite in the chewing slide to be sure that they are not again interfering owing to the adjustment of the posteriors.

The case is now ready for the home treatment. Have the patient chew the abrasive material for a few minutes until it gets soft enough that the teeth readily penetrate it, giving tooth-abrasive-tooth contact. Have him use it, as suggested previously, for from ten to twenty minutes each day. The patient will experience no difficulty in grinding in the protrusive slide. Have him place the material on the anteriors, (there is sufficient in one portion to grind in all the anteriors at once) and slide the teeth backward and forward in the protrusive movement.

The patient, after learning how to use the material, can do this at home. If the teeth become sensitive, the use of the material should be discontinued for a few days. The writer has experienced very little difficulty in this regard. After the occlusion has been ground in, so that there is a smooth-sliding articulation without any interference, the case is finished, except for one or two points:

(1) It is desirable to equalize the areas of contact on each tooth, as one tooth may have a wider contact than another. Even each of them by rounding off the wide contacts with a stone, being careful not to touch the carbon mark in the centre part of the tooth. Always keep

the contact in the centre of the tooth rather than on the mesial or distal, as that causes leverage.

(2) It may be desirable to reduce the function of some tooth owing to bone loss or other reasons. This can be accomplished in two ways:— by reducing the width bucco-lingually (Sketch 14) or by



No. 14

making a point contact in the slide. Too wide a contact may cause too much drag which is a force transmitted to the supporting tissues in a horizontal direction. The writer believes that not more than twenty per cent of the area of the opposing occlusal surfaces should contact. Polishing the teeth helps.

Summary:

(1) *At the office:* By use of a stone, grind so that as many teeth as possible, (that should function in each slide) contact in the start of the working-stroke in the three slides.

(2) *Home Treatment:* Grind in the slide by use of the abrasive material.

(3) If necessary, reduce the amount of function on teeth whose periodontal structures have suffered loss of bony support.

GENERAL OBSERVATIONS

It is not necessary to do all the stone grinding at one appointment. Do one slide at a time if desired, or any amount as long as the adjustment proceeds on the definite plan. Sometimes sensitive teeth are encountered on which little grinding can be done at one time. This sensitiveness is generally due to the tooth's being continually traumatized. When this occurs, the writer usually establishes a smooth-sliding path on the tooth without any jumps (impact). This re-

duces the trauma and often the sensitiveness disappears. Possibly, enough grinding can be done to establish more axial loading. The slide is finished on the tooth and is made smooth by having the patient grind it in by use of the abrasive material. It is then left for three months. At the end of that time a little more grinding can be done without making the tooth sensitive. If this is not sufficient, again leave the tooth as before and wait another period when more grinding can be done. By this means it is possible to reduce a tooth considerably without ever making the patient uncomfortable. However, it is always necessary to have the patient finish the grinding each time by use of the abrasive material, since it is the absence of jumps in the working-stroke that reduces the trauma. This could be carried on over a period of one or two years, if the work was started before too much destruction had occurred in the periodontal tissues:— the operator doing a certain amount during the semi-annual check-up. (This serves as another tie between the patient and his own dentist.)

No mention has been made of adjusting the bite in centric relation. This is not necessary if a sliding articulation is established, as the abrasive action will remove all minor disturbances anywhere in the slide. But, if for some reason, a sliding articulation cannot be established, adjustment in centric relation is of the greatest importance. As only a small percentage of cases fall into this category, this will not be discussed further in the paper.

The writer believes that, if a tooth is loose, adjustment should be done with a stone in centric as well as eccentric relation, to reduce the severe trauma as soon as possible. It is often advisable to grind the loose tooth slightly out of occlusion for the full length of the working-stroke. (It is well to get the habit, when thinking of occlusion, of considering it in

terms of the full length of the working-stroke.)

If the reader will acquire the habit of observing occlusions by examining the three slides, the writer is quite sure that the former will be encouraged to attempt occlusal adjustment, as he will often observe cases in which the grinding of one or two teeth on each slide is all that is required. Even if all the teeth are not ground in to contact simultaneously at the beginning of the working-stroke, but only two or three more are brought into contact and ground in to glide smoothly, a real service is done for the patient.

Imperfect grinding, done only with a stone leaving jumps and roughness in the slide, may cause impact which is so traumatic that the teeth may even become sensitive. But the grinding in with the abrasive material takes care of this.

The use of the abrasive material alone, with no instruction to the patient, may also do harm in many cases as the wear coming in the second molar to second bicuspid area, often throws more of the load on the area from first bicuspid to first bicuspid on the other side.

Actually, although the writer adjusts many occlusions in his practice, he encounters very little difficulty and is still

often surprised at the small amount of stone-grinding necessary.

Systemic angle. The rate of destruction of the supporting tissues is affected by:

- (1) The severity of the trauma.
- (2) The resistance of the tissues and their ability to repair damage.

Any systemic disturbance, such as diabetes, anaemia or vitamin deficiency that lowers the resistance of the tissues and their ability to repair, increases the rate of destruction in the supporting tissues. For example: a healthy person whose periodontal tissues were standing up quite well to the stresses of occlusion, often develops a rapid case of periodontal disease if he becomes diabetic.

People have different types of bone. One type is very resistant to trauma and breaks down very slowly even if it is severe. (The teeth of these people are difficult to extract.) Others, equally healthy, have the type of bone that breaks down quickly, even if the trauma does not seem severe. (This type have teeth easily extracted.) The general health, of course, affects both types.

This, very briefly, is the systemic angle of periodontia.

(To be concluded)

Vincent's Infection

by W. Y. HAYDEN, D.D.S., London, Ontario*

THOROUGHNESS of medication rather than choice of medication is what counts in the treatment of Vincent's infection. So many drugs are advocated by writers with such divergent views that the practitioner is at times confused. Scores of remedies have been recommended, especially oxygen-liberating compounds. Most of them are good if applied properly but none is effective if

used half-heartedly. I still often fall back on the old specific that we used by the gallon in the army during the last war, liquor arsenicalis and wine of ipecac, though it has not been mentioned in the literature for over twenty years.

Effective procedure demands:

1. That all slough be removed by prolonged spraying and light swabbing,
2. That the medicament reach the full

* Dr. Hayden died suddenly on March 13.—*Editor.*

depth of every gingival sulcus or pocket.

3. That the applications be frequent at first—twice the first day if possible, and then daily until the infection is cleared, which should not take more than three or four days.
4. That the drugs selected should vary from sitting to sitting—this brings quicker results than when the same drugs are used throughout the course.
5. That the patient take sufficient vitamins, especially Vitamin C.
6. That the patient co-operate reasonably well in home care.
7. That he does not transmit the disease to others.
8. That, once the infection disappears, to prevent recurrence, every nidus and every irritation be removed, especially subgingival calculus.

Whether one chooses to use chromic acid, hydrogen peroxide, mallophone, kaodrox, entox B, or any other remedy, the medicament must come into actual contact with the most deeply penetrated of these anaerobic organisms. For carrying the medicines to the bottom of the sulci such devices may be employed as:

1. A barbed broach with the barbs filed blunt, carrying a few shreds of cotton.
2. Pledgets of cotton saturated, packed for a few minutes under the gums between the teeth.
3. The gums held back with a flat burnisher while the medicine is forced down from a spray bottle.

To recognize a case of Vincent's infection readily is important, whether it

be acute or subacute. As the acute type usually has the classic symptoms of ulceration, pain, fetid breath, foul taste and malaise, it need not be stressed. However, the subacute, or low-grade type, is not so easily diagnosed; often the pathological manifestations are very slight, sometimes requiring a magnifying glass to detect the epithelial break-down. There is usually undue redness. The patient complains though of a sore mouth. The longer I practise the more attention I pay to the complaints of the patient, no matter what the dental disorder. Patients do not come to the dentist with wholly imaginary complaints.

I recently saw a case that had been treated superficially for several months. There were chemical burns on the gingival tissue from the use of sodium perborate but the Vincent's was still present in a subacute stage. This case was better the second day after using intensive treatment with several different drugs, and discontinuing the former treatment.

Low grade cases are carriers and these patients must be as careful about personal contact as the virulent cases. They usually require longer and just as thorough treatment.

Young and inexperienced dentists, especially young dental officers with the armed forces, have rather an exacting duty now, when this is and probably will continue to be on the increase. It is important that they recognize the symptoms instantly, to prevent its becoming epidemic, and that they can treat it quickly and effectively, to prevent lessened efficiency. A few thorough treatments, at close intervals, is the solution.

Conventions

75TH ANNUAL CONVENTION OF THE ONTARIO DENTAL ASSOCIATION, ROYAL YORK HOTEL, TORONTO, MAY 18-21, 1942.

(Dentists from the U.S. and from all parts of Canada will be welcome.)

AMERICAN DENTAL ASSOCIATION, BOSTON, MASS., AUGUST 24-28, 1942.

The First Inter-American Orthodontic Congress

by G. V. FISK, D.D.S., Toronto, Ont.

ON MARCH 16 there was convened at New Orleans an Orthodontic meeting which will go down in history. It was the joint session of the American Association of Orthodontists and the First Inter-American Orthodontic Congress.

Since the annual meeting in New York last year, when it was decided to invite representatives of the Republics of Latin America to join with the Association in an Inter-American Orthodontic Congress, its officers have been hard at work. Dr. Claude R. Wood, President of the American Association of Orthodontists, in co-operation with Dr. John W. Ross, Philadelphia, Chairman of the Organizing Committee of the Congress, contacted representative men in each of the Republics of Latin America, with a view to the appointment of a representative to the Congress from each country. In each country enthusiastic endorsement was given the proposal to bring the Orthodontists of the Americas closer together. The plan also received the official endorsement of the American Dental Association through its President, Dr. Oren Oliver.

With the co-operation of the United States Government, through its Good Neighbour Policy, one delegate was appointed from each Republic in Latin America and one from the Dominion of Canada. The countries and the names of the Official Delegates representing them are: Argentine, Dr. David M. Cohen; Bolivia, Dr. Jaime Zamorano; Brazil, Dr. Virgilio Moojen de Oliveira; Canada, Dr. G. V. Fisk; Chile, Dr. Luis De La Carrera; Costa Rica, Dr. Robert Chartier; Cuba, Dr. Sergio Giquel; Dominican Republic, Dr. Horacio Read; Ecuador,

Dr. Alfredo A. Morales; Haiti, Dr. Jules Thébaud; Honduras, Dr. Alberto F. Smith; Mexico, Dr. Samuel Fastlicht; Nicaragua, Dr. Fernando Jose Fuentes; Panama, Dr. Manuel M. Diaz; Paraguay, Dr. Rodolfo Pagano; Peru, Dr. Ricardo Salazar; El Salvador, Dr. J. Benjamin Zaveleta; Uruguay, Dr. Oscar M. Aldescoa; Venezuela, Dr. Jose Araujo Carrillo. All the above delegates were named Honorary Presidents of the Congress.

Only one of the twenty Republics of Latin America was not represented—the Republic of Colombia, whose delegate, Dr. Alberto Botero, was unable to attend. However, in addition to Dr. Fastlicht, two additional orthodontists from Mexico attended the Congress—Drs. Matia Muraire and Dr. Rutilio Blanco, and a representative from the Canadian Dental Corps—Lt.-Col. Harvey G. Bean, Officer Commanding No. 6 Company.

On Tuesday, March 17, after presenting their credentials, the delegates convened and elected, as officers of the Congress, Dr. Claude Wood, President, and Dr. John W. Ross, Secretary-Treasurer. Commencing with the opening session, and lasting throughout the whole meeting, there was manifest such keen enthusiasm toward every part of the proceedings that it was quite evident that careful selection had been made of the delegates, and that leaders of orthodontic thought have been chosen to represent the Americas.

The Inter-American Orthodontic Congress and the American Association of Orthodontists held their scientific sessions jointly at the New Orleans meeting. The



Delegates to the First Inter-American Orthodontic Congress

Back row—left to right: Dr. Manuel Moreno, Philadelphia, Pa., Chilean Consul; Delegates:—Drs. Ricardo Salazar, Lima, Peru; Rutilio Blanco, Mexico City, Mexico; Samuel Fastlicht, Mexico City, Mexico; Rodolfo Pagano, Asuncion, Paraguay; Luis De La Carrera, Santiago, Chile; Oscar Aldecoa, Montevideo, Uruguay; Claude R. Wood, President, U.S.A., John W. Ross, Sec'y-Treas. U.S.A.; Andrew F. Jackson, Chairman, Reception, U.S.A.; Enrique Ripalda, Quito, Ecuador; Jaime Zamorano, Le Pas, Bolivia; Alberto F. Smith, Tegucigalpa, Honduras;

Bottom row—left to right: J. Benjamin Zavaleta, San Salvador, Salvador; Sergio Giquel, Havana, Cuba; V. Moojen de Oliveira, Rio de Janeiro, Brazil; Jose Araujo Carrillo, Caracas, Venezuela; Fernando J. Fuentes, Managua, Nicaragua; Jules Thébaut, Port au Prince, Haiti; Horacio Read, Ciudad Trujillo, Dominican Republic; Roberto Chartier, San Jose, Costa Rica; Manuel M. Diaz, Panama City, Panama; Alfredo A. Morales, Guatemala, Guatemala; David M. Cohen, Buenos Aires, Argentine.

result was one of the finest programmes in orthodontic history. Following the formal adjournment of the meeting of the American Association on Thursday, the scientific sessions of the Congress were continued all day Friday when lectures and clinics on orthodontics were presented by leaders of orthodontics and correlated subjects throughout America.

During the New Orleans sessions of the Congress there were discussed several matters of particular significance to the dentists of the Americas, some of which had been mentioned by Dr. Wood in his Presidential address. The most important of these were: 1.—That the name be the First Inter-American Orthodontic Congress. 2.—That a Continuing Committee of the First Inter-American Orthodontic Congress be appointed to act until the publication of the Proceedings. 3.—That

the Proceedings of the Congress be printed in the three languages of the Western Hemisphere — Spanish, Portuguese and English, and that a copy be sent to each of the Dental Colleges of Central and South America. 4.—(a) That, during the meeting of this Congress, a session be convened to form a Committee of Contact, the duties of which will be to receive proposals as to the advisability of organizing a Second Inter-American Congress. (b) That this Committee of Contact act as an Organizing Committee and that it should have power to nominate the necessary Sub-committees to bring about a Second Congress.

Each delegate was authorized to cooperate with the Executive Committee in the organization of Orthodontic Societies and to encourage orthodontic specialization in his country. All of these recom-

mendations received the endorsement of the delegates.

Before the adjournment of the Congress, the delegates unanimously endorsed a resolution recommending the holding of a Second Inter-American Congress. All delegates were made members of the Continuing Committee from which the following were chosen as an Executive Committee:

President, Dr. Claude Wood, Knoxville, Tenn.

Secretary-Treasurer, Dr. John W. Ross, Philadelphia, Pa.

Brig.-Gen. Leigh A. Fairbank, Washington, D.C.; Dr. Vernon Fisk, Toronto, Canada; Dr. Samuel Fastlicht, Mexico City, Mexico. These five to represent the continent of North America.

Dr. Sergio Giquel, Havana, Cuba, representing the West Indies.

Dr. Alfred A. Morales, Guatemala, representing Central America.

Dr. Ricardo Salazar, Lima, Peru; Dr. Oscar Aldecon, Montevideo, Uruguay; Dr. Amando Monti, Buenos Aires, Argentina. These three to represent South America.

March 16 a reception was held at Antoine's famous old New Orleans restaurant which was arranged by a committee under Dr. Andrew F. Jackson, Philadelphia. This gave the members of the American Association of Orthodontists an opportunity to become acquainted with the delegates before the opening session of the Congress.

The dinner tendered the Inter-American guests by the American Association of Orthodontists, at which Mr. Louis B. Pate, acted as genial host and interpreter, was held at the Roosevelt Hotel. Mr. Pate is Executive Vice-President of the Mississippi Valley Shipbuilding Company and former Vice-Consul to Brazil from the Government of which country he received a decoration for his splendid work in connection with the Good-will Mission. Brig.-Gen. Leigh A. Fairbank, recently retired Chief of the United States Army

Dental Corps, gave an address of welcome. As each delegate responded he received a hand-engraved certificate of membership in the Congress. During the dinner given by the Delegates on Friday evening a suggestion was made by Dr. Oren Oliver, President of the A.D.A. and endorsed by Dr. Philip Adams, Trustee of the same body, that the House of Delegates of the A.D.A. be requested to extend an invitation to the dentists of all the Americas to unite in an Inter-American Federation of Dentists. Under this Federation, each participating society would, of course, retain its individual autonomy but would meet from time to time with the other Federated Societies. This suggestion was unanimously endorsed by the delegates.

At the conclusion of the Congress at New Orleans the Official Delegates left for Washington, D.C. where they were the guests of the Army Dental School and the Walter Reed Hospital at a special course in general dentistry, arranged by Brig.-Gen. Fairbank and Colonel Lowell Wright. Here was presented a program of particular value in the fields of dental, maxillo-facial and plastic surgery. A highly competent staff of trained dental officers working under conditions which approach the ideal and which include excellent physical facilities enabled them to present within the short space of one week by lectures and demonstrations, the gist of modern dental practice. These presentations were made in such a manner as to make one feel proud to be a member of the dental profession.

En route to Washington a stop was made at Knoxville, Tenn. where the delegates were met at the train by Dr. Claude Wood's father, mother and a representative group of Knoxville dentists, and were taken by motor car to see the Norris Dam, a part of the Tennessee Valley Authority. Following a reception at the home of Dr. and Mrs. Wood the

delegates were the guests of the Knoxville Dental Society at dinner where addresses of welcome were given by Mayor Astaire and Dr. George Coffey, President of the Knoxville Dental Society. During the evening Dr. Manuel Diaz, the Panamanian delegate, an accomplished operatic tenor, delighted the guests and their hosts with two songs accompanied at the piano by the Canadian delegate. This spontaneous gesture of typical Southern hospitality on the part of the dentists of Knoxville, deeply touched the visitors, who considered it a token of the high esteem in which Dr. Wood is held in his own community.

As a gesture of good will and to further cement the cordial relations between the delegates and the dentists of the United States, the First District Dental Society of the District of Colombia, invited the delegates to attend a special meeting on Tuesday evening at which Dr. LeRoy Johnson of New York City was the essayist.

Although the scientific program was completely filled each day, the evenings were left free for social functions. The chief of these was the banquet on Saturday night at Mayflower Hotel. On this occasion, distinguished guests included, Ambassadors and Ministers of the various countries, as well as Dr. Reese, Head of the Pan American Union, and Officials from the State Departments. Also present were prominent members of the dental and allied professions, as follows: Dr. Oren Oliver, President American Dental Association; Dr. O'Rourke, Chairman of the Committee on Survey of the Dental Curriculum of American Association of Dental Schools; Mr. Eli Lilly, President American Trade Association. In addition, the members of the Staffs of the Army Dental School, The Walter Reed Hospital, and the Army Medical Library and their wives were guests.

During the evening Dr. Claude Wood

and Brig.-Gen. Leigh A. Fairbank were each presented with a beautiful hand-engraved certificate and a gold medal on behalf of the Delegates by Dr. Sergui Giquel, Havana, Cuba, as a token of their appreciation of the work done by these two men towards the success of this most interesting and profitable Congress.

Other social functions held during the week in Washington included a dinner in honour of the delegates and the Dental Trade Association, a reception at which Commodore Raymond C. Wells, Immediate Past President of the International College of Dentists paid a high compliment to the countries represented by admitting to fellowship in the College their official representatives. The delegates were also entertained at dinner by Dr. David Lynch, Chairman of the Pan-American Committee of the American Dental Association.

After a visit and a further short course of instruction on Monday, March 30th at the Navy Hospital the delegates left to spend a few days in New York City. About one-half of them returned immediately to their respective countries. The remainder have been able to arrange to extend their stay in America from two to eight weeks longer in order to enable them to accept the generous invitation extended to them by the Kellogg Foundation to take further instruction at the University of Michigan, Ann Arbor.

To Dr. Claude Wood and Dr. John Ross, President, and Sec.-treas. respectively of the First Inter-American Congress, the orthodontists of both North and South America owe a special debt of gratitude. The stimulus which each delegate received will be an inspiration to him for many years. Finally, the influence which these delegates will exert upon their fellow countrymen should be of inestimable value in establishing solidarity among the people of the western hemisphere.

The Forum

• RECREATIONAL EXERCISE IN THE ADVANCING YEARS OF LIFE

by F. A. WILLIUS, M.D., M.S. in Medicine
Section on Cardiology

EACH year death claims an amazing toll from heart disease among sedentary persons in middle and later life during periods of excessive physical activity. These candidates, to a large extent, comprise professional men, executives, bankers and others whose accustomed duties and crowded hours of application leave little or no time for physical exercise. Such persons, even though their younger years may have permitted athletic pursuits and the acquisition of creditable muscular development and general bodily health, allowing them to engage in arduous physical feats without unusual fatigue or other untoward effects, soon lose this reserve when subjected to sustained physical inactivity.

Their memories, however, readily recall their previous prowess and they forget that the ensuing years have occasioned an expenditure of vital reserve which cannot be reaccumulated and that certain vital components of their bodies, notably the heart and arteries, have inevitably participated in the metamorphosis of life which is designated as the aging process. In addition to these natural consequences many sedentary persons acquire excessive body weight as the middle phase of life arrives, which in itself imposes extra and unnecessary load on the already less adaptable circulatory system. Furthermore, among the group under discussion are many destined to become afflicted with hypertension.

The years of relative physical inactivity, increased nervous tension consequent to great responsibilities, excessive and indiscreet diets, and immoderate indulgence

in alcoholic beverages and tobacco frequently accelerate the divers forces of physical decline. On countless occasions, these persons meet their nemesis during an ill planned vacation. This appears to be the time when intelligence and judgment are most likely to be utterly abandoned and the enthusiasm of the youngster when school takes a recess is reclaimed. The vacation may be one in which the scenic wonders of America are to be viewed and ridiculous distances are traversed in remarkably short periods, no touristic wonder is ignored, and the trip, invariably made by automobile, eventuates in a speedster's dream. Such an experience certainly defeats all intentions of rest and relaxation. Sporadic hunting expeditions, in which the hunter is suddenly exposed to the stresses of unaccustomed activities, often under adverse weather and climatic conditions, results in exertions which are extremely hazardous. Then there is the already exhausted person who possesses the conviction that his vacation must be spent playing golf, morning, afternoon and evening. The golf course, which may be hilly and far more strenuous than the accustomed one, is entirely ignored.

Such physical debauches are regrettably not confined to the vacation period. They frequently occur in the so-called orderly routine of life. There exists the middle-aged or elderly man who suddenly becomes exercise conscious. He becomes fascinated by the magic of gymnasium classes, frequently in session during the noon hour or at the close of the day. Some crony has reduced his weight 25 pounds (11 kg.) and has miraculously escaped death, yet unwittingly influences his friend to run the same hazard. The gymnasium floor has proved to be the

death arena for many sedentary persons.

Conscience, without a doubt, frequently haunts the sedentary, preoccupied middle-aged man. It recurrently reminds him of the unhygienic budgeting of his time. The day is occupied by the intensive application to business or professional duties and many evenings are consumed by equally strenuous and frequently indiscreet social participations, either as host or as guest. The man forgets the fact that the accepted scheme of life is notoriously disproportionate, namely eight hours or less of sleep and sixteen hours or more of activity and responsibility. Thus, conscience may without judgment, prod him to engage in physical activities to which he is not accustomed. His arbitrary scheme of life does not permit him to shorten his hours of work and therefore physical recreation must be crowded into the already filled day as best it can. This ill chosen time invariably occurs at the close of the day, when, already tense and tired, he rushes off to the golf course or the gymnasium, and hurriedly participates in physical activities so that he can dine with his family and be ready for the social program of the evening. How wittingly inconsistent is the presumably intelligent adult man: if he would only ponder the evident truth of the problem, it would immediately be apparent that he could not operate his business affairs economically and profitably if he utilized the same principles that he applies to the conduct of his personal life. No attempt at self economy is evidenced.

There is no argument against the premise that life can be productive, energetic and interesting and yet conform to the biologic laws of nature. Pauses of rest and relaxation are in no sense of the word periods of wasted idleness. Relaxation has almost become a lost art in the abnormal tempo of an efficiency mad world, and unless this treasured attribute

of the past is reclaimed many of the medical achievements of the last century will have been in vain. How useless are the meritorious accomplishments which have accrued from relentless scientific research to eradicate and control infectious diseases which in the past killed countless infants and children as well as adults, if the only effect of these accomplishments is to permit these people to live into the years in which heart disease prematurely interrupts their existence.

This problem is of much importance, not only from the standpoint of national efficiency but also as it pertains to the individual community and its components. I have little patience with the person who argues that his personal destiny rests within himself and that his course of conduct is his affair and no one else's. This obviously is not the case. No man is responsible only to himself. Furthermore, a sick man is a liability, particularly if his illness is protracted, and a dead man is a total loss, even though his life is amply insured.—*From Proceedings of the Staff Meetings of the Mayo Clinic, January 7, 1942.*

• THE AETIOLOGIC ROLE OF CHEWING TOBACCO IN CANCER OF THE MOUTH

by H. L. FRIEDEL and L. M. ROSENTHAL,
J.A.M.A. 117:2130-2135, (May 10), 1941

A REVIEW is presented of the available literature about cancer of the mouth in addition to eight cases wherein the concept of tobacco chewing as an aetiological factor in cancer is supported. The cases presented are all males, over sixty years of age and all have chewed tobacco for over fifty years. The cancerous lesions were found to be in exactly the same areas where the tobacco quid was held. The sites of development of the lesions were the mucous membranes of the cheek in six cases and the mucous membrane of the alveolar ridge in two

cases. In addition, widespread areas of leukoplakia were present surrounding the neoplasm and even partially covering its surface. In all probability leukoplakia is a precursor to the new growth. In connection with this it is of interest to note that in two cases the quid was shifted to the other cheek because of the developing irritation and leukoplakia appeared at the new sites. In all cases the Wassermann reaction was negative. All cases responded to treatment by radiation in large doses.—*L. L. Taft, per N.Y. Jrl. of D., October, 1941.*

• ANTISEPTICS OF BACTERIAL ORIGIN

(Excerpt from paper entitled, Antiseptic Dyes and the Sulphonamide Compounds, by E. G. Sita, in London Hospital Gazette, Oct.-Nov., 1941.)

A GROUP of compounds of great interest is that which, as Fleming says, "threatens to be a serious rival to the sulphonamides." These are impure substances of marked bacteriostatic and bactericidal activity, extracted from certain moulds and bacteria.

Fleming's "penicillin" (Fleming, 1929; Chain et al., 1940), while possessing very low toxicity and containing perhaps only 50 per cent of the active principle, has four times the bacteriostatic power of sulphathiazole against staphylococci and haemolytic streptococci, and is twenty times as potent as sulphapyridine; it is particularly effective against

the gas-gangrene organisms. It has recently been the subject of a clinical trial (Abraham, et al., 1941), where it was successful in a small series of streptococcal and staphylococcal infections. Unfortunately it is as yet difficult to obtain constant and adequate supplies of the drug.

"Gramicidin," extracted from *B. brevis*, a Gram-positive sporing soil bacterium (Dubos, 1939), is strongly bactericidal to all Gram-positive organisms. It is crystalline and heat-labile, but not a protein; it may have something in common with the violet dyes employed in Gram's stain. "Tyrocidin," from the same source, is effective also against Gram-negative organisms. Both of these new compounds are, unfortunately, highly toxic, but good results are being reported from local application.

"Aspergillin" is an antiseptic derived from a mould similar to *Penicillium*; "actinomycin A" (red) and "pyocyanin" (blue) are bactericidal dyes derived from natural sources; also from *B. subtilis* has been extracted a powerful antibacterial substance.

It will be of great interest to see whether these compounds show any similarity in structure and mode of action to the modern antiseptic dyes and sulphonamide drugs, or whether they represent an entirely new mechanism in chemotherapy.

CANADIAN DENTAL ASSOCIATION MEETINGS

The Board of Delegates of the Canadian Dental Association will assemble in the Royal York Hotel, Toronto, Ontario, on Thursday, May 14, at nine o'clock in the morning for a three-day session.

There will be a General Meeting of the Canadian Dental Association in the Royal York Hotel at five o'clock on Monday afternoon, May 18.

• **EXPERIMENTAL INVESTIGATIONS
INTO THE EFFECTS OF VARIOUS
FILLING MATERIALS IN THE
HUMAN PULP**

by E. B. MANLEY, L.D.S., Manc., Eng.

(Summary of paper in the Proceedings of the Royal Society of Medicine, Section of Odontology, September, 1941.)

THE results of the preliminary experiments carried out on dogs have been substantially confirmed by this investigation on human teeth.

It has been shown that no serious changes occur in the pulp tissue under cavities filled with zinc oxide and eugenol. In two cases some changes were observed, but the reaction was slight and not of a serious nature. Clinical evidence supports the view that this material is of a non-irritating and sedative character.

Silicate cements are seen to have a marked irritant effect on the pulp, producing degenerative changes two weeks after the insertion of the filling under a shallow cavity. The odontoblast cells undergo various degrees of degeneration or may be completely destroyed. Inflammatory changes in the deeper part of the pulp, evidenced by round-cell infiltration, indicate the toxic nature of this material. These results do not necessarily condemn the use of these cements, but the lining of the cavity with some non-irritating material is clearly indicated. In a plastic state silicate cement will tend to saturate with acid the fluid in the dentinal tubes and after setting this material does not become neutral. In the example shown depth of cavity as a factor influencing the degree of reaction in the pulp is well illustrated. Under the deepest part of the cavity, where the irritant is most intense, degeneration and destruction take place. At the edge, where the cavity floor is further away from the pulp, the irritant has become sufficiently weakened and stimulation of the cells occurs with the result that secondary dentine is laid down.

Silver amalgam produces a definite

reaction which presents distinctive characteristics. Vascular changes in and around the odontoblast layer are the most pronounced feature in the early stages of this reaction. With one exception, which occurred under a large and deep cavity, no toxic effect producing round-cell infiltration was seen to occur. The thermal conductivity of this material must be taken into account. In the human tooth subsequent thermal changes will transmit stimuli to the pulp and will thus maintain a degree of irritation which in a deeper and larger cavity will tend to produce a more serious type of reaction with inflammatory changes. For this reason a cavity lining of a non-irritating and non-conducting material is always advisable to ensure proper insulation.

The copper oxyphosphate cement used in these experiments, as in the case of dogs, is seen to be capable of producing a most serious and destructive reaction which, under a deep cavity, extends well into the pulp tissue. The possibility of bacterial infection having occurred accidentally during cavity preparation was eliminated by staining sections in the series with Gram. The results proved to be negative. Generally speaking, copper oxyphosphate cements have never been suspected of causing pulp irritation, but Crowell (1927) in an investigation into the physical chemistry of dental cements has shown that on the basis of acidity copper cement should be quite as likely to cause pulp trouble as silicates. He states that copper cement is no more acid than silicates to start with, but after several days it begins to become more acid. Further investigation into this group of cements is being carried out.

In conclusion there remains yet one other factor to be taken into account, but which cannot be estimated, namely the degree of vitality of the individual pulp. As the late Dr. Kronfeld has stated: "In every tissue reaction the resistance of the

cells is a decisive influence and, since the limit of this resistance is unknown, it is impossible to determine how much irritation is necessary to produce a certain form of tissue reaction." This, in conjunction with the fact that pulps may die without producing clinical symptoms, thereby lulling us into a state of false security, emphasizes the need for further investigation into the pathological changes which may occur as a result of operative procedures carried out in conservative dentistry.

• STOMATITIS NICOTINA AND ITS EFFECT ON THE PALATE

by KURT THOMA, D.M.D., Am. J. Orthod. & O. Surg., 27: 38-47, 1941

THE use of tobacco in any form, whether smoked or chewed, causes, under certain conditions, chronic inflammation of the oral mucosa as well as the pharynx and throat.

There are two methods by which smoking may affect the oral tissues. First, there are the effects of the products of combustion and heat, associated with the combination of suction and irritation, that leads to the inflammation of the ducts of the mucous glands. Secondly, there is the chemical action which is especially due to the tar and nicotine, the phenolic bodies, and pyridine bases of ammonia which the cured tobacco contains. McCarthy (1936) observed that the method of smoking plays an important role in the localization of the effect. Exhalation of smoke through the corner of the mouth affects changes in the buccal mucosa near the angles of the lips, while suction on a pipe may direct the smoke directly to the palate. Sutton (1939) writes that stomatitis nicotina affects especially individuals with fair and sun-sensitive skins. The man with blue eyes, blond hair, and keratosis on his face is very liable to develop leucoplakia, or even cancer of the mouth, and if there is any indication of

such a development, he should give up any form of smoking.

Other patients present a palate which, in addition, is covered by small red spots. This condition is either due to an inflammation of the orifices of the epithelial ducts, or to the localized breaking down of the surface epithelium.

The round-cell infiltration in the corium points to an inflammatory condition and indicates the presence of a stomatitis that may be the fundamental cause of the disease. In the cases described, the aetiological factor happened to be the use of tobacco, as indicated by the habits of the patient, the deposit on the teeth, and the improvement when smoking was discontinued, as well as the fact that in one case only that part of the palate not protected by a denture was affected. — *N.Y. Jour. of D., October, 1941.*

• EFFICACY OF LOCAL USE OF SULFATHIAZOLE POWDER IN DENTISTRY AND ORAL SURGERY

by P. L. MEACHAM, D.M.D., and EDWIN E. OSGOOD, M.D., Portland, Ore.
(Summary of paper in *Jour. of the A.D.A., October, 1941.*)

LOCAL application of sulfathiazole as a prophylactic measure after 287 tooth extractions and 160 operative procedures in the oral cavity resulted in a decreased incidence of infectious complications and greatly decreased the duration and amount of discomfort, swelling and disability.

Local application of sulfathiazole powder after drainage and irrigation for control of pre-existing infection was employed in two cases of osteomyelitis of the ramus and mandible with drainage and five cases of cellulitis of the mandible and maxillae.

The local application of sulfathiazole powder has proved more effective in the prevention or control of infection in dentistry and oral surgery than has any measure previously used.



PRINCE EDWARD ISLAND



D. T. Wayne, Charlottetown

NOVA SCOTIA



S. G. Ritchie, Halifax

NEW BRUNSWICK



W. C. Carruthers, Saint John

Editor — M. H. GARVIN, Winnipeg

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ALBERTA



John Clay, Calgary

BRITISH COLUMBIA



J. S. Bricker, Vancouver

Direction

Recently I received a letter from an Ontario dentist in which he said he was taking a course in public speaking and was finding it well worth while. I have only met this man once for a few minutes but I am confident that he will succeed, for he has ambition, ideals, and has set a goal for himself. He has given direction to his life. Mr. Winston Churchill, the famous British Prime Minister, in his Autobiography repeats a conversation he had with the late Lord Balfour. "What is the most important quality for a man to succeed in life?" inquired Mr. Churchill. "*Direction*" was the instant reply. Many men fail because they do not know what the goal is that they desire to reach: they lack direction. Not having any definite aim they continue to practise in a haphazard way and eventually, when things go wrong, they invariably place the responsibility for failure on the wrong cause.

To succeed in dentistry one must give some thought to the direction life is to take. As someone has said one must have one unwavering aim; find one's purpose and fling one's life out to it. Try to be somebody with all one's might. A great purpose can work miracles. It has changed the face of the world more than once. A faltering purpose has no place in this

strenuous age in which we live. "It is the single aim that wins" so let us keep on being dentists and be proud of it. An old proverb says: "The master of one trade will support a wife and seven children, while the master of seven, will not support himself."

There is a great sense of satisfaction when a dentist has become truly efficient, and has reached the place of power where his skill and talents are recognized and appreciated and returns for his labours begin to come in. To have no plan, no direction in life is like going to sea without a compass. One may land anywhere except where one wishes to land.

"From a child the idea was drilled into Pitt that he must accomplish a public career worthy of his illustrious father. Even from boyhood he bent all his energy to this great purpose. He went straight from college to the House of Commons. In one year he was Chancellor of the Exchequer; two years later he was Prime Minister of England, and reigned virtually as king for a quarter of a century. He was utterly oblivious of everything outside his aim; insensible to the claims of love, art, literature; living and steadily working for the sole purpose of wielding the governing power of the nation. His whole soul was absorbed in the overmastering passion for political power." Such a man with such a purpose is bound to win and the world stands aside to let him pass.

Without going to these extremes a dentist can attain to a position of success quite satisfactory to himself but he must remember "That no man can serve two masters." In these days there are many stars to which a dentist can attach his chariot. If I mention but one some reader will write to me and point out a number of other stars to which I might have referred. Be this as it may, I wish to refer just now to one brilliant star just waiting for many dentists to attach their chariots and that is the star of Victory.

Victory will bring in its train many problems for the dental profession. To solve these problems successfully will mean the intense concentration of all our leaders. To defeat Hitler is not the whole problem. World systems should be so arranged as to ensure a generally higher standard of living with certain minimum standards of shelter, food and clothing, below which no one should be allowed to fall. Great strides have been made in this direction but we have still a long way to go.

Are not minimum standards of health and nutrition as important or even more important than minimum standards of education? Is not a sound body as important as a trained mind? In 1936 the average per capita tax per annum for school education in fourteen Canadian cities was fifteen dollars and seventy cents.

In the City of Winnipeg we spend nearly three million dollars a year on education and approximately eighty thousand dollars only on the health of our school and pre-school children which includes medical, dental and nursing service. In other words it costs us about ninety-five dollars a year to educate our public school scholars and about one hundred and forty-one

dollars to educate our intermediate grade scholars, including salaries, operation of plant, financial charges, administration, auxiliary services, etc. In fairness to the educational system it should be pointed out, however, that funds allocated for education take care of all the children while in the case of health matters children from well-to-do homes are looked after by their own physician or dentist. In any case there is a great variation between the public cost of education and the public cost of health and this variation would be found, no doubt, in the other Canadian cities. Surely we can afford at least a quarter as much for health as for education, if necessary, in order to keep our children physically fit!

When there is a general recognition of this principle there will not be nearly enough dentists to do the necessary work. A greater difficulty still is the question of prevention. Undoubtedly our keenest minds should be working on this problem and should be given government support. If this public enlightenment could come even in part by the time hostilities cease there would be no problem with regard to the rehabilitation of our men now serving in the Dental Corps.

True, our governments, realizing the importance of national health, may force upon the public some compulsory health measures which may or may not be welcomed by either the said public or the medical and dental professions. This being the case, committees in several of our provinces are already working on the problem of how best to give direction to this movement as it gains momentum. The Canadian Dental Association has appointed a very capable committee to study this matter and co-ordinate all the various provincial activities in such a way as to benefit the public and the dental profession throughout Canada.

This goal calls for *Direction* in the lives of many of our dentists, a concentration of purpose, and a determination to face this new frontier with faith and hope and with the definite object in view of having our plans for the future well matured while the war is still in progress.

BOOK REVIEW

Professional Dentistry in American Society (Part 1 and 2), by Alfred J. Asgis, Ph.D., D.D.S., Assistant Professor of Oral Surgery and Lecturer on Orientation at the New York University College of Dentistry. Published by the Clinical Press, 1123 Broadway, New York. Cloth bound, 248 pages. Price, \$4.50.

A review of Part One of this book appeared in the January issue of the Journal. This present volume which is a limited edition, contains all of Part One and in addition, the nine

chapters of Part Two. This latter Part is based on the 1939 teacher education study by the author. The specific object of the work is to orient the student and the reader with the broad, general concepts which underlie the foundation of dentistry and its growth.

The author is convinced that the public has so far failed to appreciate fully the health values of dental services and it is his hope that this work may contribute to the much needed enlightenment.

Part Two deals with the education of den-

tists and teachers of dentistry; the principles of professional dentistry, social dentistry, dental education and the dental school at work in American democratic society.

Asgis is not satisfied with dental conditions throughout our land and has a burning desire to do something about it. He proposes a universal health service so that everyone may be

able to receive dental service. He wants teachers specially trained in schools having this social aim and that these schools should receive adequate financial support.

This book should have a special appeal to teachers, education and professional health workers, in fact all of those who are interested in dental health.—M. H. G.

There must be discipline in work. Many complain that life is short, but are these people alive even for eight hours a day? The amount of work that can be accomplished by a man who is at his desk at dawn every day, or at his bench, or in his shop, is miraculous.—André Maurois, in Dental Record.

CORRESPONDENCE

Enlistment

To the Editor, Journal of the Canadian Dental Association.

"Nothing in life is more important to any man than his own self-respect, and the respect and esteem of his fellow men and women. After the war the nature of the service a man has rendered during this period of national crisis, will, of necessity, have a great bearing on his future life. If he has enlisted, even though he has been returned, by the direction of the Government, to industry he has a future reference that will be invaluable to him in the days to come." The above remarks by the Hon. C. D. Howe apply to everybody—dentists included.

Some time ago, Col. Lott, Director of Dental Services, issued a statement in your columns showing that many more dentists were required to properly care for the armed forces. The situation is even more acute today and it is hard to understand the apathy on the part of some dentists, particularly of younger dentists in larger centres where they can be spared.

Some have said to me "What are the civilians going to do; I'm too busy to look after all who apply now." My answer to that is that the civilians will have to be satisfied with less extensive treatment. The armed forces must be kept dentally fit even though the civilian population has to suffer to some extent. Of what value would a perfect set of teeth be if we should lose the war and be placed in the position of having very little on which to use our teeth?

More dentists are required now. They wish to win the war but they want the other fellow to do the winning for them and also the sacrificing. Financial obligations are not considered as sufficient reasons for refusing to serve one's country which is in such deadly peril at the present time.

Although 22% of the dentists of Manitoba have enlisted we still have 20% more civilian dentists in Manitoba than we had in 1914 and 50% more than we had in 1918, but the population has made no such commensurate increase. The same is true of some other provinces but let us quit looking at the other fellow and answer for ourselves. Our forces should not suffer for lack of dental service.

I have never yet met a dentist who has regretted the day on which he decided to offer his services but I know many who wish they had served when they had the opportunity. We need less wishful thinking and more real sacrifice in order to win.

(Signed) W. W. WRIGHT, Lt.-Colonel,
District Dental Officer, M.D. 10,
Officer Commanding No. 30 Coy., C.D.C.

Rubber Shortage

To the Editor, Journal of the C.D.A.:

Canadian dentists can help in no small degree to reduce the very serious rubber shortage, as in the aggregate we are among the large consumers. Reclaimed rubber takes the place of new material for a large number of necessary purposes.

I suggest that the four thousand dentists of

Correspondence

Canada each provide a receptacle for used rubber dam and discarded rubber articles. From time to time the contents should be taken to the salvage depots. Rubber dams should preferably be washed and at least dried before

being put in the box. If we all contribute, the amount thus returned to the manufacturers will be of a great deal of value.

(Signed) JOHN W. CLAY,
Calgary, Alberta.

DENTAL CORPS NEWS

Mobile Dental Unit

A fully equipped mobile dental unit for service overseas will be purchased by the St. George's Society of Toronto. More than \$3,000 has been collected to cover the cost.—*Toronto Star, March 7.*

M.D. No. 4, Headquarters Montreal, Quebec

Captain O. A. Lefebvre has been promoted to the rank of Major. A graduate of McGill University, he is a governor of the College of Dental Surgeons of the Province of Quebec. He served in the C.A.D.C. in the last war. Prior to the present war Major Lefebvre was in charge of the outdoor dental clinic of the

Montreal General Hospital for a year. —*Montreal Star.*

M.D. No. 3, Headquarters Kingston, Ontario

PROMOTION

Major I. W. Hamilton, district dental officer of M. D. 3, has been promoted to the rank of Lieut.-Colonel.

Colonel Hamilton is widely known throughout the dental profession of Canada. Shortly after his enlistment in 1939 he went overseas with the C.D.C. as a major and was placed in charge of Corps Laboratory Service. In June 1941 he was recalled to Canada to take a post at National Defence Headquarters.—*Ottawa Citizen, March 5.*

Major J. A. Nattress

A well known dentist of Sault Ste. Marie who has been stationed at C.D.C. H.Q., Ottawa since July, 1940 has recently been promoted to the rank of Major.

Major Nattress served for three years in the Canadian Field Artillery during the last war. He was in the Sault Ste. Marie and Sudbury Regiment (M.G.) from 1925 to 1939 during which time he was promoted to Major. The unit was called for active service in September, 1939 and in February, 1940 Major Nattress transferred to the C.D.C. with the rank of Captain.

He opened the dental clinic at the R.C.A.F. Station, Trenton, while serving with No. 36 Coy., C.D.C. (R.C.A.F.) No. 1 Training Command and was stationed at Trenton until he came to Ottawa.

He has served as President of the Sault Ste. Marie Dental Society and is Past Master of Algoma Lodge, A.F. and A.M.

Major Nattress is married and has two small sons. His hobbies are golfing and gardening.





Photo by Karsb, Ottawa.

Major W. E. Meldrum

A well-known Ottawa dentist, a native of Ottawa, who has practised here since 1923 has recently been promoted to the rank of Major.

Major Meldrum served in the Royal Canadian Naval Volunteer Reserve in the last war and during that time, he was Flag Lieutenant to the Admiral Superintendent, H.M.C. Dockyard, Halifax.

He was appointed to the Canadian Dental Corps in 1939 and has been stationed in Ottawa as a dental officer at Headquarters.

He is a member of the Ottawa Dental Society and was President of the local 100 Club and also International President. For several years he was on the Board of Directors.

2nd Lieut. J. T. Peters

Lieut. Peters has had considerable army experience. For a number of years he was a Sergeant in the Argyll and Sutherland Highlanders and his activities included employment as an instructor in weapon training.

When No. 36 Company was formed and attached to No. 1 Training Command, he was immediately taken on as Staff Sergeant and was later transferred to Ottawa in the same capacity.

He comes from a family of soldiers and has two brothers overseas at the present time. His father is a Permanent Force Imperial with 42 years' service to his credit.

Lieut. Peters' home is in Hamilton. He is married and has a family of two children.



Major Leonard E. Kent

Capt. Leonard E. Kent, Adjutant, No. 39 Coy., Canadian Dental Corps, attached to the R.C.A.F., was recently promoted to Acting Major.

Major Kent was appointed Junior Dental Officer, attached to the 9th Field Ambulance R.C.A.M.C. in April 1938, reported for duty with the original Active Service Dental Coy. in No. 4 M.D. in October 1939, and was promoted to Captain's rank in December 1939.

Major Kent was appointed adjutant of No. 39 Coy., Canadian Dental Corps, attached to No. 3 Training Command, R.C.A.F., in September 1940, which appointment he has held to date.

Major Kent a past president of the Montreal Dental Club is bilingual and has been associated with the recruiting of dentists in this district for the Canadian Dental Corps.

Major Kent attended St. Laurent College, Westmount High School, and was graduated by the McGill University Dental Faculty in 1923.

Major Kent practised his profession in Lachine, Que., where his wife and four children make their home.



Photo by Blank-Stoller Ltd.

2nd Lieut. Fred R. Arnot

2nd Lieut. Fred R. Arnot of Victoria, British Columbia, enlisted with No. 37 Coy., C.D.C. (A.F.), Western Air Command, Victoria, B.C., as Superintending Clerk on February 5, 1940. He was appointed 2nd Lieut. (Administrative) on October 10, 1941, after completing a four weeks' course at O.T.C. (W.C.), Gordon Head, B.C.

Prior to enlistment he held the position of Assistant Office Manager in Ryan-Wilson Co., Ltd., Victoria, B.C.

He is a member of the United Commercial Travellers of America and is actively engaged in sports, mainly badminton and tennis, having been president of the Y.M.C.A. Badminton Club of Victoria for the 1939-40 season.

He is also very interested in music being one of the originators of the Victoria Y.M.C.A. "Red Triangle" Concert Party which entertains the men of the services in and around Victoria.

He is a member of St. Andrew's Presbyterian Church and is married.



NEWS FROM THE PROVINCES

ONTARIO:

Toronto Academy

With this issue the activities of this group closes under the presidency of Dr. S. A. MacGregor. Congratulations "Sandy" on your leadership. Toronto has had a good year. All speakers have been of high calibre, and the attendance at every meeting has been good. As Dr. Lloyd Grose assumes the chair he too can be assured of the loyalty and support of his Toronto Colleagues.

Prior to Dr. Higley's meeting in February, Dr. Charles McLean, Secretary of the Academy had a rather inspiring letter from a colleague who has practised over fifty years. It made the members of Academy Council feel good. Here it is—

Toronto, Feb. 17, 1942.

To Dr. Chas. McLean:

Thank you and the Academy members very sincerely, indeed, for your generous invitation to attend your meeting on Wednesday evening. While getting up in years I have still a great deal of youthful vigour and I would have had keen pleasure in attending so important a meeting as that which Dr. Higley's address would be sure to make it.

I am deeply sensible of the importance of children's dental care and am often saddened to note what little value is placed on the deciduous teeth by many dentists and physicians. There is a great deal of education needed on such an important subject. I congratulate the Academy in bringing it to the fore and wish Dr. Higley success in stirring up the profession to its importance. I am sorry my engagements ahead prevent my hearing this treat.

Signed,—A. H. ALLEN,
Graduate 1887.

1942-43 Toronto Academy Council

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President—Dr. Lloyd M. Grose

President Elect—Dr. Charles McLean

Secretary—Dr. Harold Skilling

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District No. 5—Dr. J. Gordon Chalmers

Public Dental Health Chairman—Dr. W. D. Cavanagh.

Dr. L. B. Higley

University of Iowa, College of Dentistry

On February 18 the Toronto Academy had Dr. L. B. Higley as its guest speaker. The subject under discussion was "The Dentist's Responsibility to the Child" and Dr. Higley demonstrated his ability in a masterly address. Later this summer a paper prepared by Dr. Higley will be carried in this journal.

The Academy Executive again brought outstanding essayists to Toronto on March 12. Drs. Isaac Schour and Allan Brodie, University of Illinois, are well known for their research studies and their scientific findings on the growth of teeth and jaws. Papers presented at this meeting will also be carried later in the season by our national journal.

Donald Clark, D.D.S., Grimsby

Retiring after more than half a century in the practice of dental surgery, Dr. Donald Clark is receiving the good wishes of a host of friends for the enjoyment of a well-earned leisure.

After graduating from the Royal College of Dental Surgeons, Toronto, in 1888, he began the practice of his profession in Hamilton. For the greater part of the time his office was in what was then the Bank of Hamilton Building, now the Canadian Bank of Commerce Building. On completing thirty-one years in Hamilton, to which he travelled daily from his home at Grimsby, Dr. Clark established his practice in Grimsby which he carried on for 22 years.

In 1910, he was elected to represent his district upon the Board of Directors of the Royal College of Dental Surgeons, and in 1913 became President of the Board for the ensuing two years. He has been for some years, and will continue to be, an Honorary Member of the R.C.D.S.

Dr. Clark also played an active part in the local affairs of his community, having served for fourteen years on the Board of Education, the last seven of which he was Chairman. The Grimsby Horticulture Society was fortunate in having him on its directorate for a number of years, being President for two years. Indeed, Dr. Clark became well-known as a horticulturist.

turist and thousands of sight-seers were attracted to his home especially to see the tulip blooms, often returning year after year. There is little doubt that his hobby gave an immense impetus to the growing of flowers throughout the whole Niagara Peninsula.

The profession owes much to such men as Dr. Clark, who in addition to carrying on an active practice during this long span of years, found time to contribute his valuable talents to his professional organization as well as the other institutions of his locality.

Injuries

Some unfortunate accidents have occurred with some of our colleagues in recent weeks. Dr. Bradley, of Ottawa, has been suffering from a broken arm, the result of a fall on an icy walk. Dr. W. A. Porter, of Toronto, also fell on the ice and broke his back and he will be in a cast for three months. Dr. Holly Halderson, of Toronto, has given up skiing at least for this season; he unfortunately broke his leg. Glad to know that Dr. Chester O'Brien, of Toronto, is back in his office after a lengthy absence.

Sympathy to Dr. T. F. Campbell

The many friends of Dr. Campbell will learn with regret of the accidental death of his son Hugh, aged 25. He was killed in an aeroplane accident at Saskatoon on March 7. Hugh Campbell was in the R.C.A.F. Training Centre at Edmonton. He enlisted in June, 1940, as he was about to complete a course at O.A.C., Guelph. He was buried at Galt on Friday, March 13. Dr. Campbell's other son, Kenneth, is serving with the R.C.A.F.

XI Psi Phi Reunion

Don't forget the XI Psi Phi Fraternity reunion May 18 at 6.30, Royal York Hotel.

Toronto Ladies

The Ladies' Auxiliary to the Academy of Dentistry and Canadian Dental Corps, M.D. No. 2, held its monthly meeting in the form of a tea in Eaton's Round Room, February 19.

President Mrs. S. Stuart Crouch opened the

meeting with a two minute silence to the memory of Dr. Andrew J. McDonagh. Mrs. A. E. Webster expressed the opinion that it was a fitting thing for this Auxiliary to pay tribute to this kindly Christian gentleman, who was an eminent dentist, respected and loved by all his colleagues. Words of sympathy were expressed for Mrs. McDonagh, one of our beloved members and an admonition that we should do well to emulate her good qualities of courage, integrity and beautiful faith.

Mrs. McDonagh's report was read stating that 16 articles had been collected since the last meeting.

Mrs. George Grieve, sewing convener, reported the completion of five units for the Red Cross.

In the absence of Mrs. E. T. Guest, Mrs. R. W. Matchett, treasurer, reported that \$172.00 had been realized from the scrap gold donated by patients during the last month to help the war effort.

Mrs. Geo. Robinson, Health Convener of the local Council of Women, was guest speaker. Her subject, "Nutrition", was adequately illustrated by a short skit, "The Magic Market Basket".

Mrs. T. R. Marshall moved a vote of thanks and made a presentation.

Mrs. S. Richardson presided at the tea-table.

MRS. S. A. MACGREGOR.

Dental Nurses' Alumnae Association of Canada

Mrs. H. J. Cody was the guest speaker of the evening at the regular meeting of the Dental Nurses' Alumnae Association on March 10. It was held at the Women's Union, St. George St., Toronto. Mrs. Cody spoke on the purpose of the Women's War Service Committee of the University and the Visiting Homemakers' Association. Miss Anna Lindsay presided.

Miss Anne Budd has been appointed to fill the vacancy of Corresponding Secretary for the remainder of the year.

It was reported that the amount in the Alumnae mobile dental unit fund will be over \$1000 which is the cost of a unit.

OLGA GREENWOOD,

Publicity Convener.

Twenty-Fifth Anniversary of Class 17-18

All members of these years, take note that the twenty-fifth anniversary of our graduation will be held at the Royal York Hotel on Monday, May eighteenth, during the seventy-fifth O.D.A. convention.

Get in touch with Dr. Harvey W. Reid at 195 Yonge St., Toronto, at once, and let him know you are coming!

FRANK COLE.

Ontario Dental Nurses' and Assistants' Association

Eleventh Annual Convention—Royal York Hotel, Toronto, May 17th-21st, 1942

ESSEX AND KENT COUNTY CHAPTER: The major part of the March meeting of the Essex and Kent County Chapter was devoted to convention plans. The Secretary, Winifred Grier, presided in the absence of the President, Janet Hamel, who has been ill.

The members approved a donation of \$5.00 toward the annual campaign that is now being conducted for the Canadian National Institute for the Blind. As a means of raising funds, Nora Kelly and Ferna Cook will entertain at contribution teas on March 29 and May 3 respectively.

The entire membership wholeheartedly accepted the plan whereby their war work will be carried on in affiliation with the Patriotic Donators and Knitters Club. Nora Kelly will continue to serve as War Convener, the President will act as Club Witness, and the Treasurer, Barbara Wood, as Club Auditor.

WINIFRED GRIER, *Secretary*.

HAMILTON CHAPTER: The Hamilton Dental Nurses and Assistants held a dinner meeting at the Wentworth Arms Hotel on March 11. The President, Margaret Thomson, welcomed the Provincial President, Tomye Turner, members of the Brantford District Chapter, the Niagara District Chapter and the Toronto Chapter, as well as two new members from Woodstock.

Dr. John Carroll of Hamilton introduced the guest speaker, Dr. Charles Williams of Toronto. Dr. Williams gave a very interesting, illustrated lecture on his recent trip to the Eastern Arctic.

The Provincial War Fund Convener, Leta Blaber of Toronto, spoke on the work of the Patriotic Donators and Knitters Club with which we are now affiliated.

GERTRUDE KIDNER, *Secretary*.

KITCHENER DISTRICT CHAPTER: On February 11, the members of the Kitchener District Chapter held a dinner meeting, presided over by Edith Oberhaltzer, at the Maple Club. On the kind invitation of the North Waterloo Dental Society, the members adjourned to the Granite Club to hear Dr. I. H. Ante speak on "Economics". The address was illustrated with coloured lantern slides.

Mrs. Paul Diesbourg entertained at a farewell party on February 17 for Edith Oberhaltzer, the retiring President, who is now living in Port Rowan.

The newly installed President, Yvonne Jacques, assisted by Ruth Rotters and Larry Ohlheiser, was in charge of the March meeting of the Kitchener District Chapter.

At the business meeting, convention plans were discussed, and the members decided to pack several overseas boxes in the immediate future. Later in the evening, the Blue Top staff conducted the members through their plant.

RUTH CLARKE MEEK, *Secretary*.

LONDON DISTRICT CHAPTER: The March meeting of the London District Chapter was held in the office of Dr. J. A. Gillies.

The suggestion was made and accepted that we devote one evening each month to war work.

Dorothy Innes, President, was in charge of the meeting. Winifred Matheson and Isabel Scott were the hostesses.

RUTH WALKER, *Secretary*.

NIAGARA DISTRICT CHAPTER: Several members of the Niagara District Chapter joined the Hamilton Dental Nurses and Assistants at their dinner meeting, on March 11th, at the Wentworth Arms Hotel. (See preceding report of Hamilton Chapter's meeting.)

MADELINE COOMBS, *Secretary*.

SUDBURY DISTRICT CHAPTER: Ina Leikas presided at the March meeting of the Sudbury District Chapter held in the Capitol Theatre Building on March 2.

The members were privileged to have as their guest the Provincial President, Tomye Turner. Mrs. Turner told of her interesting and enjoyable trip to the American Dental Assistant's meeting in Houston, Texas, last October.

A great deal of time was devoted to convention arrangements and to planning the part that the Sudbury District Chapter will take.

MARY KENNEDY, *Secretary*.

NEW CHAPTER: The Membership Convener, Loretta McCaughey, and the President, Tomye Turner, are pleased to announce the organization of a new chapter in Ottawa.

Lois McCaughey has been elected President of the Ottawa Chapter. Other members of the executive are: Leta Harper, Vice-President; Olive Cumming, Secretary; and Hildred Randall, Treasurer.

Our best wishes for a successful career are extended to the executive, the charter members and the many dental nurses and assistants in Ottawa, who, we hope, will lend hearty support to their new chapter.

FERNA LEECH COOK, *Publicity Convener*.

QUEBEC:

Montreal Dental Club

The Montreal Dental Club held its January meeting in the Club Rooms on the 29th. The speaker for this occasion was C. Leonard Huskins, B.S.A., M.Sc., Ph.D., D.Sc., F.R.S.C., Professor of Genetics at McGill University. The Professor gave an informal lecture with lantern slides on the subject "Hereditary Factors Affecting the Teeth." Dr. Douglas Angus introduced the speaker and Dr. Flinn Flanagan presented a hearty vote of thanks. The presentation of golf trophies was made at this meeting, low gross to Dr. A. W. Nutchell and low net to Dr. Earl M. Laurin.

The general meeting for the month of February was also held in the Club Rooms, 1414 Drummond Street. The speaker for this occasion was David L. Thompson, M.A., B.Sc., Ph.D., F.R.S.C., chairman of the Biological Sciences Group of the Faculty of Arts and Science, McGill University, Professor of Biochemistry and Chairman of the Department. His subject was "Vitamin Problems of

Today." Dr. Thompson gave a most interesting and inspiring address and answered many questions of vital importance in the field of vitamins. Dr. Angus presided and the speaker was thanked by Dr. Jack Dohan.

ALBERTA:

Edmonton Dental Society

The February meeting of the Edmonton Dental Society was held on February 3, at the No. 3 Manning Depot R.C.A.F. The members of the Society had been invited to dinner and an inspection of the Dental Clinic, by the Officers of the Dental Corps, attached to the Depot. The dinner was held in the Officers' Mess.

Capt. A. Singer, the chairman, called upon Sqdn.Ldr. G. A. Hodgetts, acting officer commanding the Manning Depot, who welcomed the forty or more Edmonton dentists to the Depot and said that they were proud of the Dental Clinic operated by three dental officers, namely Capt. A. Singer, Capt. M. A. McIntyre, and Lieut. Duke.

Major R. MacDougall of Dental Corps headquarters in Calgary, was on hand to express his thanks to the officers at the Depot for making such a joint gathering possible. He said that while it was quite common for Officers in the Dental Corps to be entertained by dental societies, this was probably the first time the Dental Corps had acted as host to a whole dental society. Major MacDougall maintained that the dentists both in and out of uniform belonged in the dental profession and therefore were all striving for the betterment of the profession.

After the dinner the guests were shown through the hospital and dental clinic. The three dental officers before mentioned, spared no pains in showing their guests the equipment provided by the Corps. Capt. Singer demonstrated how each new recruit was charted. The exact condition of his mouth on enlistment is recorded as well as any dental work done after he enters the army. The average time taken to do this was easily demonstrated to be two minutes per man.

The laboratory in connection with the clinic was inspected. Some very interesting

work was being done in soldering the stainless steel skeletons for partials by the use of an electric arch soldering torch.

About 10.15 P.M. the meeting was adjourned. All those present were enthusiastic in their commendation of the work the Dental Corps was doing.

Dr. F. J. Netherton of Delia, Alberta, has moved to Penticton, B.C. and is practising there.

Dr. J. M. Dixon, of Calgary, still remains ill at the coast and his many friends in Alberta hope that he will soon be returning to practice.

Calgary Dental Society

The new officers of the Calgary Dental Society are:—

President: Dr. A. A. Holliss.

Vice-president: Dr. L. E. Smith.

Secretary-treasurer: Dr. D. E. Green.

Hospital Dental Service

A committee of the Calgary Dental Society composed of Dr. John W. Clay and Dr. H. L. Freeland was appointed to discuss with the Advisory Council of the Holy Cross Hospital the question of dental appointments to the staff of the Hospital.

As a result the following members of the Calgary Dental Society have been appointed to the staff of the hospital:

Dr. J. M. Dixon.

Dr. E. M. Doyle.

Dr. H. L. Freeland.

Dr. John W. Clay.

This committee hopes to formulate plans for more efficient dental work at the hospital, provide a series of lectures on hospital dental procedure and in general improve the facilities for dental surgical practice.

Health Insurance Scheme

The comprehensive health insurance scheme which is being prepared at the request of the Dominion Government is of great importance to the dental profession in general, and in a particular respect to the dentists of Alberta.

While most of the medical, nursing, hospitalization and pharmaceutical needs of the population are met in some way at the present time, the number of dentists in Canada required to provide complete service for everyone, as is being proposed, is completely inadequate. Should the scheme be accepted by the Dominion Parliament and the Provincial Legislatures, and put into operation either before or at the end of the war, there will be immediately a need for several times the number of graduate dentists now practising in Canada.

In any case it is obvious that the almost total lack of dental service to over three-quarters of the population of Canada is a disgrace to democracy and an injury to the general health level of the people which will not much longer be tolerated.

In view of the coming needs for a much larger number of dentists, the dental school of the University of Alberta should not only be continued, but adequate steps should be taken to improve the physical equipment and teaching facilities. There is coming a real need for an adequately financed and well equipped dental school in that part of Canada which is west of the Great Lakes.

J. W. C.

Plan Speed-Up in Dental Classes

Continuing a policy of providing more professional and technical men for the armed services, the University of Alberta will accelerate its course in dentistry. Dr. H. E. Bul-yea, dental department, said the final details of the plan had not been decided but that courses would start in June and last until December. The next class would resume in February and continue until August.

It was not definite if the speed-up would affect the single "pre-dent" year, which is the first year at the university for dental students straight out of grade 12. The acceleration would affect more than 50 students who are registered in dentistry. This year's class in dentistry, which will graduate in May, numbers 15, and most of these are entering some branch of the service as dentists. Out of the 13 men who graduated last year, 11 joined the Dental Corps of the Army.—*Edmonton Journal, Feb. 26, 1942.*

Calgary Dental Assistants' Association

Following refreshments served by Miss Jean Reid, Miss Louise Simonson, and Miss Irene Watts on Monday evening, February 9, President Miss Vera White introduced and welcomed Dr. R. R. McIntyre, a prominent Calgary dentist, to the members of the Calgary Dental Assistants' Association. A very interesting talk on gold inlays and crowns was then enjoyed.

The club was again very fortunate in having as its guest speaker for the March meeting, Major A. M. Palmer. Miss Ethel Fisk, Mrs. Ruth Agate and Miss M. Ellis served refreshments following which Major Palmer gave an address on "The Dental Assistant in the Army." This proved to be of great interest to all the members.

Nineteen members were present."

M. G. Auld.

SASKATCHEWAN:

Moose Jaw Dental Society

The monthly meeting of the Moose Jaw Dental Society was held in the Grant Hall Hotel, March 5, with the President, Dr. F. C. Harwood, in the chair. Dr. D. Fraser Smith, of Regina, was the clinician for the evening. Dr. Smith was accompanied by Drs. Mounteer, Fasken, and Brett, and Capt. Grant, C.D.C., all of Regina, as guests of the Society.

Dr. Smith gave a very comprehensive and instructive clinic on full denture prosthesis, using the technique as devised by Dr. F. S. Meyer, of Minneapolis. This technique uses the mouth as the articulator to secure balanced occlusion in all excursions of the mandible. At the conclusion of the clinic which was very much appreciated, Dr. Smith presented the Society with typewritten instructions for each step of the technique and the Society has had copies made for each member desiring it, which makes the clinic even more valuable and practical.

Regina Dental Society

The regular meeting of the Regina Dental Society was held in the Drake Hotel, March 12, with the President, Dr. C. C. Clermont, presiding. After the dinner and the business

of the meeting was disposed of, Dr. A. J. Brett gave a talk on the uses of sulphanilamide and its derivatives in the practice of dentistry. The talk was considered very practical and timely.

One of the latest recruits for the Air Force Section of the Canadian Dental Corps is Dr. A. Duff Leask, of Moose Jaw, who reports in Calgary, April 1.

MANITOBA:

Winnipeg Dental Society

The March meeting of the Winnipeg Dental Society, held in the Fort Garry Hotel, had Dr. W. R. Watchler of Yorkton, Sask. for its guest speaker and clinician. Dr. Watchler is one of the few who possesses the innate ability, patience and perseverance to become an outstanding gold inlay technician. He knows how to prepare a flawless cavity to begin with and his anatomical carvings are a joy to look at, admire and envy. Being naturally gifted along this line it is fun for him and no doubt a pleasure that never palls. For the common herd to attain to his degree of proficiency first must come the desire to become a master of the art and then years of blood and sweat and toil. To the one who travels such a route a mastery of the art perhaps brings even greater joy and pleasure than for the gifted to whom the road was less arduous. The President of the Society Dr. E. J. Robb presided.

Manitoba Dental Association

An interesting happening in connection with the increase in the registration dues for Manitoba dentists is the fact that there are fewer unpaid dues at the 1st of March this year than at any time in the history of the Association. Usually there are from 10 to 20 members who for reasons best known to themselves do not take advantage of the two dollar discount for prompt payment prior to March 1st. This year there were only 6.

Dental Nurses and Assistants

Mrs. C. E. O'Grady, Treasurer of the Winnipeg Womens Air Force Auxiliary was the interesting guest speaker at the regular dinner meeting of the Winnipeg Dental Nurses' and

Assistants' Assoc. held March 2, in the St. Regis Hotel, Miss Jean Gordon presiding.

Mrs. O'Grady explained some of the more important features of this well organized Auxiliary, the membership of which is approximately 900. These women devote themselves to providing the many comforts so much appreciated by our Air Force boys, regardless of

nationality or where they may be stationed.

During the business meeting it was decided that payment of the annual fees to the Western Canada Dental Nurses' and Assistants' Assoc. be made and the treasurer was instructed to send a cheque.

The social evening held on February 24, was enjoyed by all who attended.

EMPIRE NEWS

GREAT BRITAIN:

Distribution of Medical Man Power

(Excerpt from *Guy's Hospital Gazette*, Feb. 7, 1942.)

It is disturbing to reflect that after two and a half years of war, there should still be ground for a controversy concerning the use or misuse of medical man power. Although it is possible that the present machinery could be used to better advantage than it is at present, the real difficulty still seems to be faulty distribution and misuse of the available man power in the actual Services themselves. This could be remedied to some extent by substitution of clerical staff for many of the non-medical duties that doctors are called upon to perform.

The Effects of Air Raids on Children

The Medical Officer for the County of London has made inquiries as to the effects of air-raids on London school children over a certain period. He came to some surprising and reassuring conclusions. Disastrous results on children's nerves were anticipated and psycho-therapy clinics were set up to deal with cases but not a single case was brought to

them. Children stood up to the raids as well as, or better than, the adults and they developed no nervous disorder or shock as a result of their experiences. Where children were actually injured by bombs the results were of course quite different and the policy of evacuation was entirely justified and should be continued and extended.—*The Dental Record*, Feb., 1942.

AUSTRALIA:

Shortage of Water

The catchment areas supplying Sydney, with water are now suffering the worst extended dry period on record—over seven years of drought. Dentists have been advised that flushing water in dental cuspidors should be turned off when no patient is in the chair and only turned on when required and that aspirators should not be left running when not in use. The dentist is also advised to use the "Pillar shower cock" over his basin so that in washing his hands one pint of water may be used instead of the two or three pints necessary with the ordinary tap.—*Dental Journal of Australia*, Jan. 1942.

C.D.A. Members to be Guests at Diamond Jubilee Convention

The 75th annual meeting of the Ontario Dental Association will be held May 18-21 at the Royal York Hotel, Toronto. The Board of Governors' executive have extended the privilege of conducting some of the sessions to visiting officers of the Canadian Dental Association and have cordially invited all fellow Canadian Dental Association members to attend the entire Convention. A program of exceptional merit has been arranged, the details of which will appear in the May issue. Make reservations early.

GENERAL NEWS

Dental Hygiene Institute of Chicago

The program of education of the Dental Hygiene Institute of Chicago actually began when sixty-eight people gathered for a luncheon meeting of the Institute on February 23. Dentists, commercial houses allied to dentistry, public health officials and representatives of women's groups interested in public health were included in the attendance. Mr. William B. Pringle, Director of the Institute, states that the message the Institute seeks to put across is first, for health and appearance take care of your children's teeth; second, for health and appearance, take care of your own; and that the message should be expressed in lay language, that it must be attractively presented, that it must have the quality of quick absorption and most important of all, it must be constantly repeated.

The media through which the Institute expects to achieve its purpose have already been determined and they include slide films and motion pictures, industrial diagnostic service, a publicity program in daily papers, company house organs, service club publication and similar printed matter, co-operation with volunteer groups and possibly the school system.

Active membership (for dentists) has been set at \$5.00 per year and all members of the Chicago Dental Society have been invited to participate.

U.S.A. Army Needs 5,309 Dentists in 1942

The army in 1942 will require 5,309 men in its dental corps, according to Col. George F. Lull, Chief of the personnel division of the United States Army Medical Corps.—*Illinois Dental Journal March, 1942.*

A.D.A. Plans New Surgery Journal

The membership of the American Dental Association is now being circularized by Dr. Harry B. Pinney, General Secretary, to determine the potential support available for a new Journal of Oral Surgery to be published by the Association. The projected journal would be devoted exclusively to oral surgery and allied subjects and would be published quarterly, monthly or bi-monthly, depending upon available material.

The committee in charge of the project has selected Dr. Carl W. Waldron of Minneapolis, as editor of the new publication. He would be assisted by an editorial staff of outstanding men in the field of oral surgery and allied subjects. The subscription price has been established at five dollars per year.

Western Canada Dental Nurses' and Assistants' Association

At the Convention of the above Association held in Edmonton last June, the following officers were elected:—

Honorary President, Miss Mary McArthur, Winnipeg, Man.

Honorary Member, Mrs. Marion Edwards, Toronto, Ont.

President, Miss Marjorie McLennan, Regina, Sask.

Vice-president, Miss Jill Lloyd-Young, Victoria, B.C.

Secretary, Miss Barbara Farryon, Edmonton, Alta.

Treasurer, Miss Hazel Wylie, Winnipeg, Man.

The Scientific and Health Exhibits of the American Dental Association

Things that were formerly of only passing interest to most members of organized dentistry have become highly essential to the very existence of our mode of life. These important new apparatus, instruments and methods will be readily understood when observed and sketched in the Scientific Exhibits in Boston's historic Mechanics Hall.

Not only are the dental activities of the Army and the Navy now of great importance, but even research and teaching activities are in a process of transition. The large numbers of young men rejected for army duty because of dental defects reveals a need for wide improvements in our methods of dental care and their administration. The teaching, research and health exhibits will reflect what American dentistry is contributing to American defense. You will find developments of value to you, to your patients, and to your community in the Scientific and Health Exhibits, so plan your time ahead to visit these exhibits in Boston, August 24-28,

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

William Yates Hayden, of London, Ontario, died suddenly March 13.

Dr. Hayden was born at Goderich and was educated in the Goderich schools until he entered the Royal College of Dental Surgeons of Toronto, from where he was graduated. Prior to the First World War, he practised his profession in his home town until joining the Canadian Army Dental Corps. Since 1921 he has practised in London, specializing in recent years in periodontia. Dr. Hayden was an active member of the American Academy of Periodontology and always stood for the highest ideals in the field of this specialty.

In the past Dr. Hayden has contributed to the pages of this Journal and we also have a paper by him in this issue on the subject of Vincent's infection. He presented a paper at the Cleveland meeting of the American Dental Association which we hope to publish later in the year.

Dr. Hayden is survived by his widow, a sister and a brother.

•

Dr. V. H. Macaulay of Calgary, died at his home on February 26, following several months of ill health.

Born in Lindsay, Ontario, Dr. Macaulay was graduated from the Dental Department of the University of Toronto in 1912 and since that time has practised his profession in Calgary. He took an active part in dental affairs, having been President of the Calgary Dental Society, and in 1934-35 was chosen President of the Alberta Dental Association.

His principal interest outside of his profession was Masonry, and in 1936 he was elected Grand Master of the Grand Lodge of Alberta.

Dr. Macaulay is survived by his widow, two sons and a daughter.

Wallace A. MacLaren, of Toronto, Ontario, aged 70, died March 4 at his home following a short illness. Following graduation from the Royal College of Dental Surgeons of Ontario in 1899 he commenced practice in downtown Toronto but a few years ago moved his office to his home in North Toronto.

He was one of the oldest members of Wilson Masonic Lodge, No. 86, G.R.C. He was Master of the Lodge in 1913.

Dr. MacLaren is survived by his widow, two daughters and a son.

•

Archibald William Forbes of Toronto, Ontario, died March 8, following an illness of some months. He was graduated from the Royal College of Dental Surgeons of Ontario in 1905 and soon after established a practise at 2 College Street, Toronto where he practised until recently when he retired, owing to ill health.

He was a member and sang in the choir of St. Andrew's Presbyterian Church. Dr. Forbes is survived by his widow, a daughter and a son.

•

Allan Weston MacGregor of Arnprior, Ontario, died on January 14, after an illness of more than nine months. He was born at Inverary, Scotland. He came to Canada early in life, attended Renfrew High School from which he was graduated in 1896. He went immediately to the Royal College of Dental Surgeons, Toronto, graduating in 1900. After graduation, he opened an office at Arnprior, Ontario, where he practised continually from 1900 until his death.

Dr. MacGregor was a Presbyterian in religion and a past Master of the Masonic Order.

... SECTION FRANÇAISE ...

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René Rochon, D.D.S., M.Sc.D., Détroit,
Etats-Unis

Orhan Okyay, D.D.S., Istanbul, Turquie
Jules Thébaud, D.D.S., F.I.C.D., M.Sc.D.,
Port au Prince, Haiti
J. M. Reposo, D.D.S., Habana, Cuba
L. B. Amyot, D.D.S., Schenectady, Etats-
Unis
M. DeVezé, D.D.S., A.I.D.O., Buenos-
Aires, Argentine

La Dentisterie

Doit-elle rester une profession indépendante?

Par le docteur A. THIBAUDEAU, D.D.S.

Professeur Titulaire à l'Université de Montréal

La profession qu'exerce le chirurgien dentiste est encore relativement jeune, puisque nos voisins ont fêté, l'an dernier, le centenaire de leur première école d'enseignement. Dans notre province, bien qu'organisés en corporation privée depuis le statut de 1869, les dentistes ne songèrent à l'enseignement qu'en 1892. C'est alors que l'Association fonda la première école dentaire du Québec.* Elle devait être bilingue. Grâce au collège des dentistes et à des dons particuliers, les cours furent inaugurés dès septembre de la même année sous la direction du Dr W. G. Beers. En 1902, nos confrères anglais décidèrent de se retirer dans une école à eux et laissèrent à l'Association le soin de disposer de celle qui existait déjà. Le Dr S. Globensky alors doyen, se retira et l'Association, par une transaction dont on ignore les détails, céda son école et ses droits aux docteurs Dubeau, Nolin et Gendreau qui s'étaient associés pour en assumer la direction. En 1904, l'université Laval nomma les docteurs E. Dubeau, doyen, J. Nolin, vice-doyen et J. G. A. Gendreau, secrétaire.

Depuis lors, affiliées aux universités de Montréal et de McGill les deux écoles ont décerné des diplômes de compétence à 900 dentistes, occupés aujourd'hui à soulager les misères de leurs concitoyens et améliorer leur santé. Aux Etats-

* On trouvera sur cette question de précieux renseignements dans l'intéressant article du Dr P. E. Poitras, paru dans le Journal de l'Association Dentaire Canadienne, janvier 1940, pg 45.

Unis comme au Canada, des médecins furent les premiers à reconnaître que les soins de la bouche nécessitaient l'organisation d'une profession spéciale. Ils mirent cependant beaucoup de temps à considérer les dentistes comme leurs égaux. Peut-être n'avaient-ils pas tort, car il y a 30 ans, la dentisterie tenait encore beaucoup plus du métier de l'artisan que de la science du médecin. Mais depuis, les progrès furent tels, qu'à l'égale de toute autre, la profession possède ses grandes écoles, ses savants, ses laboratoires de recherches, ses services d'hôpitaux, etc. Les Associations médicales des Etats-Unis n'en furent pas pour cela complètement guéries de leurs convoitises. Périodiquement elles tentent d'absorber la profession dentaire, malgré les faillites des mêmes tentatives répétées tous les 20 ans. Cette fois, l'université de Harvard, sous les mêmes pressions en a profité pour régler un grave problème d'ordre financier, en fusionnant ses deux Facultés. Les nouveaux étudiants devront faire trois années et demie de médecine, une année et demie de dentisterie et recevront le titre de D.M.D.

Ils ne sont pas nombreux chez nous ceux qui seraient tentés de suivre l'exemple de Harvard, mais les positions stratégiques qu'ils détiennent commandent qu'on s'en occupe. Peut-être y a-t-il moyen de les convaincre que la dentisterie d'aujourd'hui, est et restera une science étroitement liée à la science médicale, mais essentiellement différente.

En effet, pris objectivement la chirurgie dentaire est un métier, un art et une science.

Un métier.—Les premiers 75 ans de notre profession connurent des développements qui tenaient en effet bien plus du métier que de la science. L'habileté manuelle et la technique constituaient pour les praticiens d'alors les meilleurs gages de succès. Quelques-uns d'entre eux jouissaient d'une culture suffisante pour s'apercevoir qu'à côté de l'aspect mécanique de leur pratique, il y avait place pour de grands développements scientifiques. Ils y mirent toute leur intelligence et aboutirent aux progrès considérables que nous constatons aujourd'hui. Pourtant, ils ne réussirent jamais à faire disparaître ce qui dans notre profession tient essentiellement du métier. Les demi-savants qui rêvent de transformer la dentisterie en une profession de pure science médicale, caressent la plus enfantine, j'allais dire la plus yanke des utopies. Ils espèrent que ce nouveau médecin, devenu thaumaturge, par ses régimes, sa diététique et ses seuls conseils distribués à la radio, va changer notre vallée de larmes en un paradis terrestre, d'où seraient disparues pour toujours, toutes les maladies de la bouche et des dents, de l'enfance à la vieillesse. N'allons pas croire que j'exagère pour le simple plaisir de ridiculiser; ces prétentions ont été bel et bien écrites, publiées et mises de l'avant comme conséquences certaines de la transformation du dentiste en médecin dentiste. Non il sera toujours nécessaire de faire des ponts et des dentiers, conséquemment de connaître la technique des métaux, des caoutchoucs, des substances plastiques et des porcelaines. Sans doute, il y a lieu de croire à de grandes améliorations possibles; mais il y aura toujours de par le monde, des caries, des malformations de la bouche et des édentés. Ces misères sont le résultat de désordres physiologiques, mais aussi psychologiques. La nécessité demeurera toujours de faire de la prothèse, donc de la mécanique.

A ceux qui croient que le dentiste devrait abandonner la prothèse aux techniciens pour ne s'occuper que de la partie médicale, ne pourrait-on pas répondre que cela équivaldrait à retourner tout simplement 50 ans en arrière. A-t-on songé, que la dentisterie opératoire et la thérapeutique buccale impuissantes par elles-mêmes à faire vivre ce nouveau praticien, seraient vite abandonnées aux mains des prothésistes? A leur tour, ces derniers sentiraient le besoin d'augmenter leur bagage scientifique pour en arriver, après une série de transformations successives, au point où en sont exactement les dentistes d'aujourd'hui. Les mêmes problèmes se poseraient encore. Alors pourquoi ces recommencements?

Un art—Si dès ses débuts, notre profession était plutôt celle d'un métier, il ne pouvait pas en être longtemps ainsi, car ceux qui en furent les premiers apôtres étaient des hommes cultivés. Ils ne tardèrent pas à s'apercevoir que les produits de ce simple métier ne pouvaient s'appliquer à la bouche humaine sans être strictement soumis aux lois de l'esthétique et de la physiologie. De là, nécessité pour le dentiste d'être assez artiste pour bien analyser la forme de la figure humaine, de tous ses traits, des maxillaires et de chacun des détails qui composent l'arcade dentaire. C'est à ce prix qu'il saisira l'harmonie de tous les mouvements qui donnent les différentes expressions. Il n'a même pas le droit d'ignorer le problème des couleurs. Et ce n'est pas tout de se rendre capable de saisir tous ses aspects divers, il lui faut par sa connaissance de la forme et des fonctions pouvoir reconstituer ce qui a été détruit, corriger les anomalies, rendre aux organes leur utilité sans y porter atteinte. En tous cas ne semble-t-il pas clair que le bon dentiste doit être artiste, en plus de posséder l'habileté manuelle de l'artisan. Peut-il en être ainsi sans de longs mois d'étude du dessin, du modelage, de la sculpture, etc.

Une science—Il ne suffit pas au dentiste d'être le bon artisan et l'artiste que je viens de décrire pour être utile à la société. Ses pièces de prothèse, seraient-elles dessinées par le plus fin des artistes, et fabriquées par le plus habile des techniciens, peuvent encore n'être que des restaurations dommageables ou du moins dangereuses pour la santé du patient si elles ne sont pas soumises aux lois de l'anatomie et de la physiologie.

Même si certains patients attachent plus d'importance à l'apparence de leur prothèse qu'à son utilité, leur but primordial c'est la restauration des fonctions physiologiques. Or, comment y atteindre sans des connaissances approfondies de l'anatomie, de la physiologie des dents, de la bouche et de toutes les parties avoisinantes. En cela nous nous éloignons de l'art et du métier. Si pour un moment l'on fut bien près de croire que la prothèse était la raison d'être du dentiste, il faut en revenir. Elle est et restera toujours un service secondaire même s'il est essentiel. Elle est la conséquence de troubles physiologiques, d'un manque d'hygiène, aggravés par la crainte ou la négligence. Le but à atteindre, c'est la conservation de l'ordre normal des organes et de l'esthétique; la prévention des maladies et de tous les désordres buccaux dont les causes remontent parfois jusqu'à la vie foetale. Or, les relations de la bouche avec les autres parties de l'organisme sont des plus intimes. C'est un fait connu, qu'une simple infection dentaire peut causer de graves ennuis aux yeux comme aux oreilles; qu'une bouche pathologique peut compromettre l'intervention chirurgicale la mieux réussie. Enfin que bien des troubles constitutionnels ont leur répercussion dans la bouche. Pour faire face à une telle situation, il faut au dentiste de vastes connaissances médicales appropriées à son état.

Que la dentisterie soit une science, on semble l'admettre partout, mais en certains milieux on oublie que cette science est inséparablement liée à un art et à un métier, où l'on ne peut devenir des maîtres sans un long entraînement. Si dans cette analyse forcément schématique vous avez pu entrevoir ce qu'objectivement la dentisterie exige de connaissance et d'habileté; ne serait-il pas logique de conclure que sans une profession indépendante et ses écoles séparées toutes ces exigences seraient frustrées.

Traitement des Canaux Radiculaires Infectés

LES INDICATIONS DU TRAITEMENT ET DE L'OBTURATION DES CANAUX INFECTÉS EN UNE SEULE SEANCE

par H. LENTULO

Chef de Clinique à l'Ecole Dentaire de Paris

(suite)

Cependant il y a des CONTRE-INDICATIONS. Il y en a deux importantes.

I. — *Cas concernant les dents dépulpées avec signes cliniques aigus, mais sans lésions péri-apicales radiographiquement lisibles.*

Ces cas retiennent l'attention par la quasi-absence d'éléments de diagnostic à l'examen radiographique. Généralement, on est en présence de la première poussée inflammatoire aiguë du péri-apex, brusquement déclanchée par une extravasation apicale de produits septiques.

En l'espèce, l'obligation classique de ne pas obturer le canal immédiatement persiste, car on est là en présence d'une maladie locale, infectieuse, aiguë, caractérisée, évoluant en huit à dix jours vers une issue spontanée des produits de la suppuration en un point variable, de moindre résistance; alors que nos interventions tendent, au moins au début, à réaliser cette issue par le canal dentaire ouvert.

Nous avons donc le devoir de surveiller attentivement ce drainage et de l'assurer malgré les obstacles créés et renouvelés par les coagulums pathologiques.

Dès que le calme est revenu — dix ou quinze jours après — l'obturation du canal peut s'effectuer comme pour les cas de la classe IV que nous verrons plus loin, c'est-à-dire, déjà, *malgré un péri-apex encore infecté.*

II. — *Cas de dents dépulpées; sans lésions radiographiquement lisibles avec signes locaux confus, et grands symptômes généraux.*

Une forme clinique, qui n'est pas rare et d'un pronostic toujours réservé, est apportée par ces cas où l'on relève des signes locaux assez confus, semblant mettre en cause plusieurs dents immédiatement voisines, d'un diagnostic difficile quand il existe plusieurs dents dévitalisées, et que l'examen radiographique n'aide pas à éclaircir; peu d'œdème visible, sauf quand il s'agit du maxillaire inférieur où le plancher de la bouche devient douloureux et peut, dès le début, donner à la palpation la sensation d'induration; les douleurs ne sont pas extraordinaires, mais il y a de la céphalée, de l'inappétence, frissons et température. Ce syndrome sommaire suffit à faire supposer une défense phagocytaire défaillante, fonction qui ne se réveillera peut-être pas spontanément et qu'il faut provoquer médicalement par une action générale: sérums, vaccins, transfusions sanguines.

Il est évident qu'il ne peut être ici question de canal à traiter et obturer. L'important est ailleurs et il n'est même plus très certain que l'intervention qui consisterait à supprimer tout de suite, par l'extraction, la dent causale, soit une manœuvre toujours recommandable, surtout si l'opération doit être tant soit peu difficile.

LES INDICATIONS:

I. — *Dents dépulpées abcédées; avec fistulisation gingivale.*

C'est par ces cas qu'ont été commencés les premiers essais d'obturation des canaux en une séance; l'imprudence — s'il y en a — ne pouvant pas comporter de suites graves ou pénibles pour le patient.

La rapidité des guérisons, leur constance et leur durée n'ont pu que m'entraîner à étendre l'essai aux cas suivants.

II. — *Dents dépulpées; avec lésions péri-apicales radiographiquement diagnostiquables; sans signes cliniques notables.*

Ce sont ordinairement des diagnostics faits fortuitement à l'occasion d'un examen radiographique systématique ou d'un aspect douteux de dent quant à sa vitalité.

Ces cas relèvent d'une obturation du canal, immédiatement après son ouverture et son nettoyage.

Le plus souvent l'horaire de travail oblige à interrompre l'opération. En ce cas, le pansement qui interviendra entre deux séances ne sera pas occlusif. Il se trouve aussi que cet intervalle opératoire, presque inévitable, constitue—pour ce cas comme pour les autres—une sorte de mise en observation rassurante; mais cette remarque n'infirmes pas, à mes yeux, la constatation essentielle de la non nocivité de l'obturation rapide et de son indication thérapeutique.

III. — *Dents dépulpées; avec constatation radiographique de raréfaction péri-apicale étendue; en période de réaction locale, avec signes cliniques légers.*

Ces cas concernent des lésions anciennes ayant toujours été plus ou moins ressenties par le patient sans avoir donné d'accidents aigus.

L'obturation rapide de ces canaux est remarquablement tolérée et les dépassements de pâte obturatrice sont—en ces cas—très souhaitables, particulièrement avec la recherche d'un effet de coiffage de l'apex, ce qui suppose une pâte de consistance un peu fluide.

L'absence de réactions douloureuses post-obturatoires ne peut s'expliquer que par la présence de la vacuité péri-apicale où les effets congestifs, produits par une inflammation d'origine chimique ou même septique, sont amortis dans un champ large et relativement souple.

Cette sorte de discrimination sommaire entre les cas bons et mauvais est bien un peu gênante pour les esprits précis... Ce sont des cas cliniques les plus fréquents et il n'est pas dans mes moyens de les habiller davantage. Mais je dois répéter, après d'autres, qu'en matière de pathologie, s'il y a des cas, il ne peut y avoir des cadres rigides pour les y enfermer et que ce sera toujours l'intelligence de l'esprit clinique qui demeure la seule base de notre action (I).

Ainsi, à mon sens, tout me permet de dire que l'obturation du canal—moyen mécanique—serait l'unique but à atteindre dans le traitement des dents dépulpées, infectées.

C'est donc rejeter au second plan les notions classiques de stérilisation et de désinfection.

Est-ce à dire qu'elles soient à négliger? Evidemment pas. Mais j'appelle ces précautions des sécurités supplémentaires qui ne sont pas indispensables et qui, en tous cas, ne doivent pas nous exposer à nuire, comme je le crois, et par ailleurs faire perdre un temps précieux, ce qui nous amène au troisième aspect de la question dont je ne peux parler sans quelque restriction mentale car c'est faire appel à des sentiments qui pourraient agacer des esprits uniquement scientifiques.

Mais il n'est pas possible de ne pas rappeler que, sous le couvert de la notion établie que le traitement d'une dent atteinte d'une lésion du quatrième degré est un traitement long, cher, et par là interdit à la majorité de la population, il existe des cabinets où on se livre—la conscience tranquille—à deux sortes d'opérations: extractions et prises d'empreintes.

Je suis convaincu que le temps viendra où ces pratiques seront sans excuses: je

(1) Au demeurant—pour calmer les angoisses—il suffirait de concevoir le traitement en question comme une mise de la dent sous *pansement occlusif et en observation*, à la différence près que, au lieu d'obturer la chambre pulpaire dans sa portion coronaire, on l'obture en totalité, quitte à la désobturer à la moindre alerte. Autre différence: au lieu que la matière obturatrice soit du ciment elle est proprement l'antiseptique lui-même sous une forme plastique.

suis convaincu que déjà le traitement d'un quatrième degré peut être moins onéreux pour un patient que l'extraction et ses suites.

Mais je serais navré de devoir penser que l'idée ait pu venir à quelqu'un que le traitement en une ou deux séances peut se défendre, à la rigueur, comme technique de seconde zone, car rien ne serait plus faux. C'est le traitement classique débarrassé de précautions excessives. C'est un traitement rigoureux qui suppose des opérateurs adroits, dignes du titre de chirurgiens-dentistes, pour qui la recherche et l'ouverture d'un canal dentaire ne représentent pas une montagne de complications.

Nouvelles Considérations sur la Méthode Bi-Métallique Oppenheim, Technique Coën

Par Maurice COEN, D.D.S.
Démonstrateur à l'Ecole Dentaire de Paris

A la séance de la Société d'Odontologie du 2 mars 1937, j'ai exposé un peu prématurément, à la demande de différents confrères, une nouvelle méthode de traitement des racines infectées et des affections périapicales par la cimentation dans les canaux radiculaires de l'aiguille bi-métallique d'Oppenheim.

Dans ma contribution personnelle à l'étude de cette question, je me suis placé surtout aux points de vue technique et clinique. J'ai appliqué le procédé depuis des années dans ma clientèle avec des contrôles radiographiques espacés et tardifs et avec des résultats toujours satisfaisants, et ces résultats ont été tous aussi précis et indéniables dans les applications faites à l'Ecole Dentaire de Paris par des élèves.

Nous avons essayé d'apporter des précisions plus grandes que je vais exposer tout à l'heure. Mais je rappelle d'abord brièvement le principe sur lequel s'appuie cette méthode, principe selon lequel la résistance biologique de l'organisme, — et en ce qui nous concerne, de la région apicale et périapicale, — si on peut l'aider, agit efficacement dans la lutte microbicide.

La méthode Oppenheim part d'un principe nouveau. Elle renonce complètement à l'emploi des antiseptiques volatils, l'agent effectif étant essentiellement fondé sur un phénomène électrique. On produit ce phénomène électrique en insérant et en immobilisant par un ciment dans la racine une aiguille composée de deux métaux reliés par une soudure. La méthode s'applique aux racines infectées aussi bien qu'aux inflammations aiguës ou douloureuses du périapex et à toutes les inflammations chroniques du même périapex, qu'il y ait ou non granulome, kyste ou fistule.

Le traitement se fait généralement en une ou deux séances. Il consiste dans la cimentation de l'aiguille bi-métallique dans la racine après nettoyage et alésage parfaits de ce canal.

Les avantages cliniques de cette méthode sont: la disparition rapide de la douleur en cas d'arthrite d'origine infectieuse ou médicamenteuse; les fistules se ferment en un ou deux jours; les granulomes diminuent et parviennent à la guérison entre six et douze mois, parallèlement à une ostéogenèse très nette. On peut dire que l'action thérapeutique est due à un phénomène d'ordre électrique. La tige cimentée constituerait un élément galvanique. Lorsqu'on reproduit expérimentalement au laboratoire un dispositif semblable, on observe un courant électrique *très faible*

($1,5 \times 10^{-9}$ ampère) qui va en diminuant à mesure que le temps s'écoule. En partant de phénomènes physico-chimiques établis, on doit admettre que l'argent libère des ions dans la solution environnante. Lorsqu'une certaine quantité d'argent a été ainsi libérée sous forme d'ions, on aboutit à la compensation des potentiels qui conduit à l'arrêt complet du courant.

Le champ électrique ou les lignes dynamiques qui en résultent n'ont, en principe, pas de limites; il diminue bien entendu au fur et à mesure qu'il dépasse les limites d'une racine dentaire et qu'il influence les tissus environnant la racine.

On peut donc affirmer que, par l'effet du courant électrique ainsi créé, les forces de résistance biologique sont mobilisées et activées dans le tissu périapical.

M. Lubetzki m'a demandé des précisions plus grandes sur la durée du courant électrique, et s'il n'est pas à redouter que, sa durée étant supposée illimitée, il puisse se produire, après la période de régénération, de nouvelles complications.

Nous avons demandé au Dr Mæbius, de Leipzig, qui avait déjà étudié la question, de nous fournir des précisions. Et voici ce qu'il m'a répondu et qui constitue la réponse à la question posée par M. Lubetzki.

"Dès le début des recherches sur l'action de l'aiguille, le Dr Mæbius a essayé de trouver une réponse par le calcul et par la spéculation, réponse qui ne soit pas qu'une hypothèse.

"Même si, du point de vue physique, l'évolution ultérieure du courant, quant à la durée, était connue, nous ne pourrions pas conclure parce qu'il existe des lacunes dans le domaine des effets physiologiques.

"Si l'on veut examiner l'écoulement du courant dans le temps, on doit considérer d'abord les divers états par lesquels passe la couche de ciment, après sa préparation pour l'utilisation; on peut distinguer trois phases:

Première phase.—Le ciment est à l'état liquide ou pâteux, il y a encore de l'acide et de l'eau en liberté; l'électrolyte existe surtout à l'état liquide, la diffusion et l'activité des ions se font bien. On peut encore enfoncer des sondes ou des aiguilles dans le ciment. Cette phase dure, à partir du moment du délaïement, de 20 à 40 minutes. Pendant ce temps, la conduction est bonne.

Deuxième phase.—Le ciment est déjà impénétrable à une sonde; mais le processus de la cristallisation n'est pas encore terminé. Il y a toujours présence de molécules d'eau et d'acide qui ne sont pas encore fixées par les actions secondaires dans des positions définitives. Par conséquent, on peut considérer l'électrolyte comme étant hétérogène, c'est-à-dire pouvant être appliqué pour la conduction du courant aussi bien pendant la phase solide que pendant la phase liquide. La conductibilité est déjà diminuée à 10^{-5} . Cette phase se place à peu près entre le 3^e et le 12^e jours. Comparée à la première phase, la diffusion est grandement retardée.

Troisième phase.—La conductibilité a diminué davantage encore, le ciment peut être considéré comme définitivement cristallisé. La diffusion est donc moins forte encore, étant réduite à un changement de place dans le cristal, les électrodes, c'est-à-dire l'aiguille, se polarisent légèrement, l'écoulement du courant est considérablement retenu; par contre survient la notion de tension des couches polarisées.

"Par conséquent, nous pouvons nous faire une opinion sur l'activité électrique de l'aiguille. Théoriquement, en vertu des principes classiques, la valeur du zéro absolu de l'activité se trouve rejetée à l'infini. La courbe de l'intensité de l'activité se rapproche peut-être, semblable à une fonction logarithmique ou exponentielle, d'une manière asymptotique, de l'axe des temps, de sorte que dans un temps calculable, qui n'est pas infini, il se pourrait qu'on atteigne des valeurs qu'on peut considérer pratiquement comme s'approchant du zéro. Des considérations théoriques nous mènent à la conclusion que l'activité doit cesser déjà dans le fini. Le Dr Mæbius regrette de dire qu'il n'a pas encore fait de mesures numériques.

"Le processus de durcissement du ciment décrit ci-dessus implique une diffusion

plus difficile des ions. L'activité de l'aiguille pendant la phase première peut être considérée comme l'écoulement du courant; avec le durcissement progressif, elle diminuera lentement.

"Il est extrêmement difficile d'en donner des précisions quantitatives; on peut seulement dire que c'est un scrupule sans fondement de craindre qu'après la régénération qui aura lieu environ six à douze mois après, l'activité électrique de l'aiguille puisse être considérée comme encore assez forte pour pouvoir devenir nuisible."

En pensant et réfléchissant à une fonction logarithmique ou exponentielle asymptotique à l'axe des temps, on verra qu'on a atteint même dans les temps finis de si petites valeurs que, comparativement à la valeur du début, on a le sentiment qu'ici la possibilité d'une lésion n'est plus à redouter. Si même la courbe n'est pas encore voisine de l'axe, on pourra, comme le fait mon ami Bernard, parler d'une cessation spontanée. Nous croyons donc pouvoir dire qu'au bout d'un an persiste encore un courant de très faible intensité (10^{-7}) et que ce courant est incapable de provoquer aucune lésion.

Dans son très savant et pourtant si clair exposé, M. Pierson était arrivé aux mêmes conclusions. Et il était également très intéressant de rapprocher son exposé de celui de M. Hemardiner quant à l'emploi du même procédé pour les stérilisations alimentaires.

D'autre part, les considérations du Dr Mæbius se retrouvent curieusement dans la communication qu'a faite au mois d'avril mon ami le Médecin Capitaine Bernard, déjà nommé, sur les différents états du ciment.

Quant à l'existence du courant, ce dernier nous a rappelé que certains phénomènes naturels comme la connaissance des phénomènes ioniques ou, dans un autre ordre d'idées, l'existence de la planète Neptune étaient connus par les calculs avant que les machines inventées par les hommes aient pu déceler et vérifier leur existence. Ici, au contraire, les observations cliniques ont révélé l'existence d'un courant par son action, sans que des instruments de mesure suffisamment délicats puissent en donner une mensuration exacte.

Enfin, je tiens à faire remarquer que les calculs du Dr Mæbius arrivent aux mêmes chiffres que ceux que j'avais indiqués dans ma précédente communication, d'après M. Hemardiner.

Il est un fait constant que nous avons remarqué aussitôt après l'emploi de l'aiguille dans les cas douloureux: la disparition de toute douleur dans les 20 à 25 minutes qui suivent la pose de l'aiguille. Mon maître, le Dr Roy a eu l'occasion de le vérifier à différentes reprises, et cela paraît répondre à l'action antalgique des courants électriques en général.

Il est intéressant de rapprocher ce temps de 20 à 25 minutes des indications du Dr Mæbius sur la première phase de la cristallisation du ciment, pendant laquelle le courant électrique passe facilement et l'ionisation de l'argent se fait sans obstacle et sans retardement. On peut donc supposer, à plus forte raison, qu'il existe un rapport direct entre le flux du courant et la cessation des douleurs.

Nous pouvons, aux remarques du Dr Mæbius, ajouter encore celles-ci: Si l'on ne peut être assuré du moment où cesse l'effet électrique, on peut cependant supposer avec certitude que les effets électriques sont devenus si petits qu'ils ne peuvent plus exercer un effet destructeur sur le tissu environnant. Les expériences cliniques et radiographiques nous servent en cela de témoins. Quelques radios qui ont été contrôlées après trois ou quatre ans, et même dans un cas après cinq ans, montrent péremptoirement l'absence de toute lésion secondaire. On peut plutôt observer une régénération progressive de l'os. Que la région périapicale soit malade, infectée ou détruite, l'aiguille arrête l'infection et la destruction, augmente la résistance biologique de la région, et l'on constate une formation nouvelle de tissu osseux autour de la

racine. Même dans les témoins radiographiques anciens de quatre ou cinq ans, on ne peut noter aucune destruction osseuse ni accident d'aucune sorte. Et nous pensons que la cause première de cette régénération est avant tout non l'ionisation mais le champ électrique (dans la sphère duquel le tissu périapical se trouve toujours compris) puisqu'il résulte de son influence une réactivation des cellules non détruites dont la conséquence est une régénération. En témoignage de ce point, on peut dire que la régénération ne se fait pas dans l'entourage d'une racine nécrotique, ce qui vient encore renforcer notre affirmation.

x x x

Dans notre précédente communication, nous n'avions pu apporter les renseignements bactériologiques indispensables à l'étude plus complète de la question, renseignements que le Dr Delater a bien voulu mettre au point. Voici son opinion sur la question:

"Avec toute la réserve que comporte une étude de date récente, et sans vouloir en aucune manière apporter des conclusions qui seraient prématurées, nous pouvons dire que l'aiguille d'Oppenheim manifeste incontestablement une action inhibitrice sur le développement microbien.

"Tous les contrôles bactériologiques que nous avons exécutés au laboratoire de l'Ecole Dentaire de Paris, sur des infections périapicales, même aiguës, après mise en place d'une aiguille pratiquée méthodiquement selon la technique de Coën et prolongée assez longtemps, tous ces contrôles ont montré la disparition de la flore microbienne.

"C'est ainsi qu'après séjour de l'aiguille pendant un mois dans une racine infectée provoquant une réaction inflammatoire aiguë du périapex, nous avons constaté l'asepsie totale du pus qui se trouvait encore en petite quantité dans la région périapicale sans occasionner d'ailleurs aucune manifestation clinique.

"Par contre, si la mise en place de l'aiguille est récente (trois à quatre jours), une arthrite alvéolo-dentaire aiguë douloureuse, même éteinte cliniquement et laissant persister une collection purulente anodine, a révélé dans le pus la présence de bactéries vivantes en grand nombre.

"Cette dernière constatation contribue à montrer que le nettoyage préalable de la cavité radiculaire par l'hypochlorite de soude ne suffit pas à détruire les microbes des tissus mous périapicaux. Il peut bien neutraliser momentanément l'activité végétatrice de ces microbes si elle est faible (inflammation chronique, granulomes) et les premières mèches stériles au laboratoire, par suite de la persistance de quelques traces de l'antiseptique; mais quand ces traces ont disparu, une dernière mèche introduite et laissée en place plusieurs jours montre, par les cultures, le réveil de la vitalité microbienne.

"Il semble donc permis de penser que *l'aiguille assure la destruction bactérienne dans les lointains périapicaux plus parfaitement que l'hypochlorite.*"

"D'ailleurs les vérifications théoriques de cette action antibactérienne poursuivies dans notre laboratoire par M. Clabault précisent régulièrement l'absence de tout développement microbien, sur un espace assez étendu autour de l'aiguille, dans un milieu de culture abondamment ensemencé disposé à l'étuve.

"Ce pouvoir d'arrêt sur le processus inflammatoire suffit-il à expliquer la recalcification de la trame alvéolaire que l'on constate si régulièrement, au bout d'un temps assez prolongé, sur les films radiographiques, ou s'exerce-t-il, indépendamment de la production électrique d'ions argent et de la diffusion des ions négatifs dans les racines secondaires et vers le périapex, une action biologique directe sur la recalcification par un mode difficile à préciser que nous essayons de déceler au laboratoire? Nous ne saurions le dire avant longtemps encore."

Telle est l'opinion du Dr Delater.

L'hypochlorite que nous employons n'est pas l'hypochlorite commun du commerce. Voici ce qu'en pensait déjà en juin 1925, le Dr Antoine Schlemmer, de

Vienne (*Zeitschrift für Stomatologie*), dans un article qui a fait l'objet d'une traduction dans la *Presse Dentaire*, numéro de juin 1926:

"Les progrès dans la technique du traitement des racines sont dus en grande partie aux perfectionnements apportés dans la pratique de l'élargissement des canaux.

"Plus nous élargissons un canal, plus nous le vidons de son contenu, plus active est l'action des agents thérapeutiques que nous utilisons. Cet élargissement s'effectue à l'aide d'agents chimiques et de procédés mécaniques. A cet effet, plusieurs produits ont été utilisés, mais l'hypochlorite l'emporte en efficacité sur tous les autres produits.

"L'hypochlorite que nous utilisons est un hypochlorite de soude à haute concentration obtenu par voie électrolytique avec faible addition de chlorure de sodium. Il ne contient aucun caustique, il n'y a pas à craindre de lésion du bord gingival. Il a une puissante action décolorante et une grande faculté de réaction. En présence de l'eau oxygénée, il se produit un violent dégagement d'oxygène. Une telle réaction est précieuse pour aider à débarrasser le canal de son contenu et le rendre perméable."

Au sujet de la désinfection des canaux, je tiens à répéter ce que mon maître, le Dr Roy, a encore dit dans la discussion de mars dernier et répété au Congrès de Lucerne: "Il y a lieu, dans le traitement des dents infectées, de tenir compte de deux facteurs que l'on confond malheureusement trop souvent alors qu'ils sont tout à fait distincts. Il y a deux choses à considérer dans le traitement des canaux: d'une part, la désinfection du canal lui-même, d'autre part le traitement des lésions périapicales." C'est ce que nous observons rigoureusement dans notre technique, à savoir: 1^o la désinfection du canal par l'hypochlorite; 2^o le traitement des lésions périapicales par l'aiguille bi-métallique.

Plusieurs confrères que la méthode intéresse m'ont posé une question au sujet du ciment à employer. On peut, en effet, redouter l'emploi d'un ciment aussi dur que le ciment à l'oxyphosphate pour le cas où l'on aurait à désobturer en vue d'utiliser la dent pour une prothèse. Il serait certainement préférable d'utiliser un ciment moins dur. Mais toutes les expériences faites jusqu'à ce jour avec d'autres ciments n'ont jamais donné les mêmes bons résultats cliniques. Du reste, lorsqu'on se trouve dans l'obligation de désobturer et de retirer l'aiguille, cela ne présente pas de difficulté en utilisant un petit foret, la section transversale brillante de l'argent étant un bon guide pour le foret.

Je rappellerai maintenant pour terminer aussi brièvement que possible la technique du traitement qu'il est indispensable de respecter scrupuleusement pour éviter le risque d'un insuccès. Ce sont du reste les principes que M. Lubetzki ne cesse de professer:

1^o Ouverture large de la chambre pulpaire pour avoir un accès facile vers les canaux; 2^o Alésage chimique du canal à l'exclusion de tout moyen mécanique; 3^o Accès vers la région périapicale.

Il est indispensable que la région périapicale communique avec la chambre pulpaire par un canal suffisamment élargi.

Je me permets de rappeler ici la technique que j'ai indiquée pour pratiquer ce traitement:

1^o *Traitement des gangrènes et arthrites aiguës sans sécrétion ni tuméfaction, ni suppuration apparente:*

La chambre pulpaire étant largement ouverte et parfaitement propre, je nettoie minutieusement les canaux; pour cela, je lave la cavité au chloroforme. Je porte à l'entrée dudit canal une à deux gouttes d'hypochlorite synthétique que j'introduis dans les canaux au moyen d'une lime à canaux à laquelle j'imprime quatre à cinq mouvements de va-et-vient. Mêmes mouvements pour introduire une à deux gouttes d'eau oxygénée à douze volumes. Il se produit alors une effervescence due à la réaction de l'eau oxygénée sur l'hypochlorite. Laver. Puis quatre à cinq mèches d'eau bouillie chaude. Sécher. Ensuite quatre à cinq mèches de chloroforme dans chaque

canal. Dès la quatrième mèche, le coton doit être blanc. S'il est teinté, même légèrement, je recommence le traitement comme précédemment. Le plus généralement, les mèches sortent propres à la deuxième application d'hypochlorite. Les mouvements des limes à canaux doivent être exécutés sans la moindre brutalité.

Ensuite j'ajuste l'aiguille, je sèche. J'enrobe l'aiguille de ciment de consistance crémeuse. Je place l'aiguille dans le canal, le plus près possible de l'apex, l'extrémité "or" toujours vers celui-ci, l'extrémité "argent" vers la chambre pulpaire. Je fais une spirale de cette extrémité.

Pour retarder la prise du ciment, j'incorpore au liquide, au moment de la préparer, une petite quantité de vaseline.

SI L'ON DOIT RACCOURCIR L'AIGUILLE, ON NE DOIT LA COUPER QUE DU COTE DE L'ARGENT.

2^o *Les racines sont atteintes de granulome ou kyste n'ayant donné aucune manifestation inflammatoire:*

Je les traite exactement de la même façon, dans la première séance.

3^o *Lorsqu'il y a tuméfaction, ou sécrétion ou suppuration, abcès au début, enfin dans les cas suspects (fistule, granulome, kyste, zone de raréfaction-osseuse ayant donné lieu à des manifestations inflammatoires):*

Je laisse les canaux ouverts pendant quelques jours pour attendre la disparition des symptômes aigus et je traite ensuite comme précédemment dans la seconde séance avec cette différence que je place l'aiguille provisoirement. Après le nettoyage des canaux, j'enrobe l'aiguille d'acide phosphorique. J'obture au ciment provisoire pour une ou deux journées. Dans la séance suivante, je traite comme d'habitude avant de cimenter l'aiguille définitivement.

Lorsque j'ai d'abord employé l'aiguille provisoirement, je la nettoye avant la cimentation définitive, en la frottant avec du papier de verre très fin.

Donc, deux opérations bien distinctes:

1^o Nettoyage des canaux radiculaires à l'hypochlorite synthétique;

2^o Scellement dans les canaux des aiguilles enrobées d'un ciment spécial.

Cette technique est très simple mais très minutieuse, et il est indispensable qu'elle soit observée dans ses moindres détails pour assurer un plein succès.

A suivre . . . Pourquoi?

Certains lecteurs n'aiment pas les articles qui ne peuvent paraître en entier dans un numéro. La contrariété qu'ils ressentent est bien explicable et semble même légitime. Un article publié par tranches perd certainement de l'intérêt, mais hélas, nous n'avons pas les moyens d'éviter cet inconvénient. Cela n'est possible que pour les revues dont les éditeurs peuvent à volonté augmenter ou diminuer le nombre de pages à leur disposition. Il n'en est pas ainsi pour la nôtre. Nous n'avons que 12 pages par numéro. Or, il est impossible d'avoir toujours en main des articles qui conviennent exactement à l'espace qui nous est alloué. Il s'en trouve toujours un qui est trop long pour paraître en entier à côté des autres. Force nous est donc de n'en publier qu'une partie et de faire suivre le reste au prochain numéro. Nous espérons que nos lecteurs comprendront cette difficulté qui malheureusement n'est pas la seule.

Dr A. Thibaudeau.

PROPHYLAXIE ET ALIMENTATION. — QUELQUES CONSIDERATIONS SUR LA QUESTION

M. le Docteur SYLVAIN DREYFUS (Lausanne)

Emu par la fréquence toujours plus grande de la carie dentaire, l'auteur estime qu'il est du devoir de tous les confrères de faire une propagande poussée en faveur de la prophylaxie. Tous les milieux sont atteints, même et surtout les milieux aisés qui ne reculent devant aucun sacrifice pour la santé de leurs enfants.

Parmi les causes de la carie, l'auteur voit surtout l'erreur qui consiste à ne considérer dans un aliment que sa valeur nutritive, calorique ou énergétique, au point que l'on arrive à négliger le mode de préhension de cet aliment, qui est aussi important peut-être que la valeur nutritive de cet aliment.

Il faut rééduquer le public, lui apprendre à manger, à mastiquer, à faire travailler les muscles masticateurs, à faire travailler les glandes salivaires, dont l'importance est certainement méconnue, à faire fonctionner les réflexes, qui seuls peuvent assurer une assimilation intégrale.

Pour cela l'auteur demande que l'on fasse la guerre aux puddings, purée, etc., aux mouilllets de pain trempés dans des liquides. Le jus exprimé d'une carotte pressée n'a pas la même valeur que la carotte nature croquée et mastiquée en bouche. De même, la carotte est plus saine mangée ainsi que si on la rape par avance à la cuisine. Et ceci est vrai non seulement pour la carotte, mais pour les pommes, pour tout.

Recommandons enfin le bon pain intégral, rassi, déconseillons le beau pain blanc, beau mais trompeur, et surtout le pain frais. Luttons contre les causes de la carie dentaire, il restera malheureusement toujours encore trop de caries.

CRAQUEMENTS ET LUXATIONS TEMPORO-MAXILLAIRES

M. le Docteur DUFOURMENTEL

Les craquements articulaires constituent une phase prémonitoire de la luxation, non pas que tout sujet atteint de craquements voie son articulation évoluer inévitablement vers la luxation, mais on peut dire que toute luxation non accidentelle résulte d'altérations articulaires qui se révèlent pendant un certain temps par des craquements.

Ceux-ci peuvent être d'intensité très diverse: Dans les cas légers, ils sont à la fois peu gênants et de peu de durée. Dans les cas plus accentués, ils deviennent douloureux, perceptibles par l'entourage et s'accompagnent très vite de limitation de l'ouverture buccale. Enfin, dans les cas plus graves, ils évoluent vers la luxation condylo-méniscale, puis vers la luxation complète.

L'anatomie pathologique explique admirablement cette progression. Dans les cas légers, il y a simplement inflammation du ménisque qui est à la fois gonflé et rétracté en arrière. Dans les cas plus anciens et plus graves, le ménisque se déforme au point d'arriver à se plicaturer. A un stade plus avancé, dès que le malade dépasse un certain degré d'ouverture buccale, le contact ménisco-condylien cesse et le condyle passe brusquement au contact même de la surface temporale.

Le traitement pendant les premières phases doit être simplement calmant. En diminuant les réactions, on fait cesser à la fois les symptômes et le gonflement progressif du ménisque. Le meilleur moyen est l'injection péri-méniscale de novocaïne non adrénalisée. A un stade plus avancé, on pourra quelquefois amener la sédation en ajoutant de l'alcool à la novocaïne. Dans les cas qui atteignent la luxation ou plus simplement dans ceux qui sont trop douloureux ou trop gênants, le seul traitement définitif est la méniscectomie.

Il est intéressant d'ajouter à ces considérations pratiques un mot de pathogénie. C'est très souvent par suite d'une coudure progressive du maxillaire inférieur que le condyle se trouve porté en avant et détermine l'irritation et la déformation du ménisque. La cause la plus habituelle de cette déformation de l'os est la perte prématurée des premières molaires, en particulier des dents de six ans et quelquefois également des prémolaires.



Eskimo Husky

*Photo by Ormal Sprungman, Minneapolis, Minn.
—Courtesy of The Beaver.*

The Comforts of Friendship

OH, the comfort, the inexpressible comfort of feeling safe with a person—having neither to weigh thought nor measure words, but pouring them all right out just as they are, chaff and grain together; certain that a faithful hand will take and sift them, keep what is worth keeping, and with the breath of comfort blow the rest away.

—Selected



Photo by Blank & Stoller Ltd.

DR. A. DOUGLAS ANGUS,
Montreal, Quebec.
President of Montreal Dental Club.

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The Importance of Conservative Activities in Middle and Later Life

by FREDRICK A. WILLIUS, M.D.,

Section on Cardiology, Mayo Clinic, Rochester, Minnesota

IN a recent publication I discussed the hazards of unaccustomed, strenuous, and periodic exercise in the advancing years of life, with special reference to the heart and circulatory system. On this important subject I felt impelled to express my views, developed from personal experience with large numbers of patients afflicted with heart disease. Among these patients were many whose first significant evidences of cardiac impairment became apparent at the time of or soon after a physical debauch. Furthermore, I realized the harm that was being done by the circulation of certain articles in lay magazines, written by lay enthusiasts, expounding many fallacious and misleading statements and exhibiting a complete lack of understanding of physiologic principles. These authors, likewise, did not accept the fact or understand the premise that life is a metamorphosis which separates human existence into definite phases. The phases of special interest in this discussion are those of middle and later life in which the very act of living has compelled expenditures which cannot be readily replenished, if at all, and in which actual changes have occurred and constantly are occurring in various essential components of the human organism.

For many persons it appears impossible to accept the individual equation of life; their concepts to a large extent are concerned with averages and perhaps with outstanding exceptions to the rule. They fail to realize the importance of inbred biologic tendencies, adaptation as determined by occupation, the toll of previous illnesses and countless other factors which profoundly influence the life and the physical status of each person. With these facts in mind it becomes possible to discuss intelligently the question of recreational exercise.

In this consideration I wish to confine discussion to the sedentary occupations, particularly to the professions. The differences between the members of the professions and those persons whose lives are spent in continuously active physical pursuits require only to be mentioned. It would be extremely dangerous to attempt to create a formulary doctrine for the safe recreational exercise of the middle-aged and older professional man. I already have stressed the necessity for an individualized regimen. Judgment and the elimination of self-prejudice are the basic considerations which must motivate the actions of the individual.

The activities contingent on the daily

round of professional duties involve physical exercise, but exercise, which is not recreational and which is of the type to which the individual has become inured from the very act of long continued repetition. This fact, together with the expenditure of nervous reserve resulting from professional duties and responsibilities culminates in tire and, under unusual circumstances, which are in reality usual situations for many professional men, in fatigue. For many persons, in addition to tire and perhaps fatigue, the element of increased nervous tension enters the problem. A status of this nature obviously is not suitable for excessive physical expenditure, when the body already clamours for rest and relaxation.

In many sections of the country convenient opportunities for outdoor recreational exercise are seasonal, limited to a large extent to the late spring, summer and autumn. Thus, a considerable period of relative inactivity confronts the practitioner during which time he relinquishes the physical training which he may have acquired five or six months previously. The heightened tone of body musculature which accrues with frequently recurrent exercise is lessened, and this reduction applies not only to the voluntary muscles of the body but to a degree to the involuntary muscles of the heart, the arteries, and the gastro-intestinal tract. Not without significance is a common expression, "I have become soft."

Athletes of various classifications as well as supervisors of physical education have long been aware of the importance and necessity of a period of training before engaging in strenuous activities. They have realized also that efficiency and stamina to endure the activities closely parallel the perfection with which the period of training has been carried out. In this program the great advantage of youth prevails with its remarkable powers of adaptation, powers which unfortun-

ately are lessened greatly or lost in middle and later life.

It is therefore advisable for the professional man who has passed his youth to heed nature's obvious laws and the accumulated knowledge of medical experience and to decide to follow these important precepts in a manner applicable to his own physical status and commensurate with his physical training. Strenuous exercise should be avoided, particularly by the person who rarely exerts himself, unless a gradual period of preparation has been undertaken and tolerance clearly established. A dangerous pitfall in this problem is the individual's reluctance to admit, even to himself, that he is growing older. The pride of the robust years of life which are passing or have passed is difficult to surrender and in the attempt to refute the inevitable facts ridiculous feats of physical dissipation are undertaken to convince both himself and others. He may escape any serious consequences for the time being, and thus deludes himself into a false conviction for which he may sacrifice his health or life at a later time.

The aging process is a reality and without a doubt a preconceived plan of nature, limiting the span of human existence according to fundamental biologic endowments. Proof of this plan becomes evident when the various species of animal life are analyzed from the standpoint of survival. While, obviously, individual exceptions occur, the tenure of different species is fairly well marked and in a general way parallels their mode of life, purpose, intrinsic endowments, and so forth. For example, the majority of birds are extremely short-lived, whereas the crocodile is known to live for several centuries, and many intermediate forms and terms of life occur between these extremities.

The aging of man appears to rest fundamentally in that ultimately universal pro-

cess known as arteriosclerosis. The condition becomes evident early in the fourth decade of life and progresses insidiously but at a different tempo in various persons. It likewise does not pursue a uniform course in the same individual. For example, the coronary arteries may be markedly involved while the other arteries of the body remain in surprisingly good condition. These arterial changes, frequently obliterative, result in impaired circulation to important organs and necessarily interfere with their functional efficiency. The more dynamic the organ, the greater is its demand for adequate circulation, particularly when unusual requirements are imposed. The heart is an outstanding example. Considerable impairment of coronary circulation may exist without the display of significant symptoms, particularly when the individual ordinarily leads a restricted type of life. This freedom from symptoms creates a false sense of security which under excessive physical

stress may be destroyed with explosive suddenness.

I will not assume the impossible task of advising the professional man regarding forms of recreational exercise which are desirable for him to pursue. These must be chosen by his particular interests and the choice obviously depends to some extent on environmental opportunities. I do, however, assume the responsibility of conditioning his selection of recreational exercise by my foregoing discussion. The fact cannot be denied that the act of growing older is not an extemporaneous one, but one that requires the same careful planning that applies to the transition from youth to maturity. More attention to these important problems will accomplish much in deferring and at times in averting cardiovascular tragedies.

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Canadian Dental Association Given Special Session at O.D.A. Convention

AFTER the opening ceremonies of the Convention on May 18, Dr. E. A. Grant, President of the Ontario Dental Association, will address the meeting then turn the gavel over to Dr. W. W. Woodbury, President of the Canadian Dental Association for the rest of the day. Following Dr. Woodbury's presidential address Dr. R. L. Rooney, Chairman of the Executive Committee, will speak and he will be followed by Lt. Col. George Cameron of the Canadian Dental Corps.

At 4.00 p.m. Harold K. Box, D.D.S., Ph.D., will present a scientific paper, "The Formation of Subgingival Calculus".

The Convention program as a whole has exceptional merit. It commences with a reception in the Royal York Hotel at 9.00 p.m. Sunday evening with music and refreshments. The guest essayists of the Convention are Dean Crawford of Indianapolis, Dr. A. H. Bulbillion of Mayo Institute, Dr. Oscar B. Markey of Western Reserve University, Cleveland, Dr. L. I. Grossman of University of Pennsylvania, and Dr. Vern D. Irwin of Minnesota Department of Health.

A splendid scientific program is assured with good entertainment for leisure hours—informal dance, vaudeville night and golf. Special program provided for the ladies.

Do not burn or destroy this publication. Sell it or give
it to a salvage organization. It is needed for victory.

The Tooth in Folk-Lore and History*

by F. ARNOLD CLARKSON, M.B., F.R.C.P., Toronto, Ontario

EVERY organ of the body has been surrounded with folk-lore, some of which was remarkable in the morning of mankind, three thousand years ago. Much of it was parable, retold by so many lips that the germ of truth was obscured or entirely lost. But some of the folk-lore of all peoples was not superstition, especially that relating to food and drugs, but rather it was the summation of inherited racial experience. Part of it was wonderfully accurate, and judged by present day physiology, even superior to our own knowledge as for example the great efficiency of the mammalian suprarenals in preventing and curing scurvy. West Coast Indians have eaten these glands from fresh-killed moose and deer for centuries and have thus escaped scurvy in the long Arctic winters. Modern bio-chemistry has shown that the adrenals are very rich in Vitamin C. When we consider the time element we must remember that in the whole great volume of the tale of human experience, only the last paragraph on the last page contains the story of scientific thinking. Many primitive races have understood some of Nature's language better than have our modernized groups.

When a child is born every organ is present except the teeth, which come into existence months afterwards. The permanent teeth at birth are already established in the gums in miniature and some of the enamel is laid down. They are larger in size and greater in number than the temporary set, and are the only examples of an organ which is entirely replaced after it has been lost.

They are the most durable of all testimony, yet the most short-lived of all parts of the body: no other organ leaves man as early in life, not even the hair

of the prematurely bald. By a strange paradox, the tooth while in the mouth may be slowly destroyed by bacteria, but once it is removed from its original setting in the jaw, it will remain unaltered for ages, and because of this phenomenon we are able to form some hazy opinions of Pithicanthropus, buried milleniums ago; or to compare the teeth of those dead fifteen hundred years, with the people living in the same place today. There is evidence in England that since the last days of the Roman occupation, the jaws have narrowed, causing irregularities of the front teeth and reduction in size of the upper laterals, while the third molars are often absent.

In former days, not everyone knew the number of his teeth. Aristotle was not alone in believing that a man had more teeth than a woman, and John Gaddesden, in Oxford, (1400-1450) believed that lost teeth could grow again, for he records that "the brains of a hare, rubbed on the gums, not only felicitated dentition but will make the teeth grow again when they have been lost." Kormannus (1694) told of several exhumed bodies, the teeth of which had grown in their graves till they were longer than a man's foot. Many people in the fifth decade of the twentieth century still believe that another epithelial outgrowth, the hair, will continue to grow after death.

The relation of the mother's teeth to pregnancy is well exemplified in the two aphorisms, "For every child a tooth" and "The young teeth tease the old ones," both alluding to the incidence of caries. The parturient woman certainly suffered much from the taboos laid on her, for it was considered highly dangerous to both mother and child to either extract or fill a tooth because of the risk of abortion,

*Read before the Ottawa Dental Society March 17, 1941.

or of injury to the teeth of the unborn. Fortunately this pernicious fallacy has gone with the tight binder of the puerperium, and the superstition that a toothache in pregnancy portended a boy.

Once in many thousand births, the newborn is found to have an erupted tooth. "The pale augurs bending low" disagreed as to the portent, some saying it meant great happiness, but the majority were pessimistic and foresaw disaster, and therefore the child was treated with barbarous cruelty and sometimes killed at birth. However, many persons famous in history had this curious anomaly. The tribune Lucius Sicinius (B.C. 450) and the hero and consul Manius Curius, (B.C. 200) are said to owe their surname "Dentatus" to erupted teeth at birth. Other names also are Mirabeau, Mazarin, Broca the physiologist and Louis Quatorze, who had three lower incisors. Among those whose curious dentition portended infamy, we must rank Richard Third,—

"That dog, that had his teeth before his eyes,
To worry lambs and lap their gentle blood,"
and Gloucester says of himself,

"The midwife wondered and the women cried
'Oh, Jesus bless us, he is born with teeth'.
And so I was, which plainly signified
That I should snarl and bite and play the dog."

And his nephew York, said of him:

"Marry, they say my uncle grew so fast that
he could gnaw a crust at two hours old."

In Eastern Europe, children with embryonal teeth became sorcerers and witches, but this danger could be removed if the teeth were extracted at once.

Perhaps no other epoch of our development caused as much parental concern as teething. The mortality among infants at this critical period was always high till the improvement in modern food and in the milk supply robbed it of much of its terror. No wonder that every precaution was taken to propitiate the powers of darkness. Even in the present day, superstitions are not dead, as witness



F. ARNOLD CLARKSON

the teething-rings and amulets for sale everywhere. The preparation for the safety of the infant began at the wedding. In Hesse, for example, the bride takes three crumbs of the bread she eats on her wedding day and puts them away to rub silently on the gums of the newborn, so that he may have a painless teething. During pregnancy, the women of some parts of Africa eat, as a religious rite, diets prescribed by the older women which modern chemistry declares to be more than sufficient in minerals and vitamins. The Indians of the Andes go several hundred miles to the sea to bring to their child-bearing women kelp and fish-eggs, excellent pre-natal foods. The midwife, at the baptism, in England, dips

her fingers unobserved in the font, and rubs the gums with it; or she draws the tail of a cat through the mouth of the child; or she may, in Turkey, burn the skin of the child's tongue with a red-hot needle. If the mother goes out of doors and sits with bare rumps on the boundary stone when the church bell rings, and gives the child a push so that it falls on white bread, then it will teeth easily, and the teeth will be as hard as stone.

Rubbing the baby's gums is probably older than history and still has its advocates. In Arabia it is a religious rite. Chewed dates are used the first morning after birth, but in other countries butter, wine, brains of a hare (a general favorite), sparrows' brains, blood of a cock's comb, fresh calves' blood, and very commonly teeth of animals such as the wolf and kangaroo. The honey of ancient Greece is all that remains in the 20th century, and it is changed to alum and honey.

Of the substances from the vegetable kingdom, peony seeds, iris root, vervain and barberry were the most popular in European countries, but horseradish, shepherd's purse, barberry, toothwort (*dentaria*) and toothache grass (*campulosus*) were in use very commonly among early Canadian settlers. The goldthread (*cop-tis*) was found in almost every rural household, but was considered specific for mouth conditions other than dentition. Sometimes these plants were used as infusions and rubbed on the gums. Others made the herbs into teething necklaces to be applied on the eleventh day of each month at eleven a.m. Onions and onion seed, for both teething and the toothache, came to us from the pyramids and still have hosts of advocates. But the most potent charm was a plant grown in a human skull.

There were, and still are, beads of many kinds, made from metal, wood or seeds, copper rings to be worn on the

finger, chains hung round the neck, and rubber teething rings to chew on. Phylacteries and amulets have even today great popularity, and charms are still quite common. For example, a key turned round in the baby's mouth and then lost, will most certainly cause painless teething; or allow a dog to lick the child; or pull the child's shirt over its head and then burn the shirt.

Any disease in the years following, was believed to be a complication of teething, till the superstition was shattered by Kassowitz in 1892. He analysed the case histories of a great number of children and found that fifty per cent cut their teeth without any symptoms, and in the remainder the disturbances were trifling. But the ghost was not laid immediately, for the medical profession continued to scarify the gums even in the first years of this century.

Soothsayers professed, in every age, to foretell the destiny of the child by considering the time of eruption, together with the number and position of the teeth which first appear. If they were cut "on the cross", for example, the child would suffer from nervous disease. In Silesia they said "teething high, buried deep". In this, as in teacup reading and astrology which amuse and interest the modern feather-brains, there was no agreement among the high priests; but the custom of making a gift to the child when the first tooth is cut is still very common.

The second dentition was also carefully guarded from the powers of evil by elaborate rituals. As far as the history of mankind can be traced certain very definite rules were observed in the care of the shed milk teeth. It was necessary, as part of the ceremony, to throw the tooth over the shoulder, preferably the left, and not look at it again. It might also be dropped into a mouse hole and the child ask the animal for a better one. In

Russia the formula was to have a child go behind a stone, cast the tooth over the shoulder and say "Mouse, little mouse, yours is the carrot tooth. Give me a tooth of bone". In Scotland, if the tooth were not burnt, a buck tooth would follow. A shed tooth set in a bracelet prevents dysmenorrhoea.

According to folk-lore, weaning is an important epoch in the life of the child, if he is to have sound teeth. If however, the mother will choose St. John's Day or Maundy Thursday, or even a full moon, all will be well and the baby will never suffer from toothache. In order to make assurance doubly sure, it would be better for the mother to sit on a stone, when the church bells were ringing, as she gave her babe its last feeding, and then return the stone to the place from which it was taken.

Every once in a while, an item appears in the newspapers recording the fact (?) that an old man (more often than a woman) is now teething for the third time, that is, he had shed both his first and second set and was "growing" a third. The late Dr. A. E. Webster took great pleasure in tracing these statements to their source and he found they were all erroneous. Most of the patients lived a long way off, but Dr. Webster wrote to a reputable dentist in the neighbourhood and where possible he paid a visit himself. He found the condition either a delayed second dentition, or an exposure of a portion of the jaw, from which teeth had been extracted many years previously. There were also several instances of supernumerary teeth that became evident only in the late decades of life. Pliny however, asserts that permanent teeth can grow again after extraction and adds "Of this there can be no doubt."

TOOTHACHE

"For there was never yet philosopher
That could endure the toothache patiently."
(*Much Ado About Nothing*—V.1)

Toothache is perhaps the most common painful disease, so that it is no wonder it is surrounded by a wealth of superstition. In Babylonian days and later, when demonology was in the ascendant, one particular demon had jurisdiction over the teeth, and he could be appeased only by libations and burnt offerings. "Nothing is gratis" said the philosopher of that day. "The gods have good business instinct and demand their pay for everything they do for helpless man." When this simple pathology was found unsatisfactory, another was sought, and perhaps the most ancient and certainly the most popular was a worm which dwelt in the carious erosion, an idea born in Mesopotamia about 1200 B.C. if we can trust a clay tablet from Nineveh. The Bosnian gypsies visualized the worm as four-headed, but although it was never described accurately, there were many noted physicians and medical writers as late as the 17th century who still accepted the vermicular theory. In 1728, Pierre Fauchard, one of the founders of modern dentistry, cast grave doubt upon it, and stated that he had never seen worms in dental cavities. Any that had been found were certainly not the cause of caries. In spite however, of the scientific proof of its fallacy, this idea still exists as a popular superstition. In India, women and quacks on the street still charm the worm from the decayed tooth. Chinese dentists give the patient some medicine which makes him cough and surreptitiously place small strips of paper in the mouth. Later, the dentist is astonished at discovering these "worms" and triumphantly exhibits them as the cause.

In the Orkneys, toothache is called simply "the worm", Manx and Gaelic have the same suggestion. Shakespeare alludes to the accepted aetiology in "Much Ado About Nothing":

Don Pedro—What! Sigh for the toothache?
Leonato—Where is but a humour or a worm,

One would think, with the pathology so simple, that the cure would be easy, but unfortunately such was not the case. Throughout the ages, almost every man thought he knew better than his fellow how to poke a fire, to rule a kingdom, and to cure a toothache; so it is no wonder that the remedies advised were legion, drawn about equally from the three kingdoms, animal, vegetable and mineral. Their very multiplicity shows that none were sovereign and most of them useless.

Most of the common European cures were a mixture of ancient usage modified by the teachings of Christianity. The patient ties up his face, a custom in use everywhere at the present day. The reason underlying this is the desire to keep out the "duppies" and other invisible spirits that populate the air. He then chooses a feast day and takes a seat in front of the church. As his friends enter they give advice, which comprises almost as many remedies as there are advisers. Elephants and insects, trees and mosses, precious stones and coal dust all played a part, applied directly to the tooth or swallowed. Amulets, scapularies, phylacteries, charms and incantations all served their day, which has not departed. Prayers were offered to running water, to St. Apollonia and the Trinity. Washing out the mouth with holy water after baptism was a popular prophylactic and used so much in Cornwall that the fonts were kept under lock and key. Today whiskey takes the place of holy water.

The "cures" for toothache were beyond computation. Many of the most popular had to do with death in some form; a tooth from a corpse worn in a bag around the neck, a splinter from a gibbet, the finger of a dead man to touch the painful tooth, or a drink out of a skull. The mole, perhaps because it was like a mouse, or because it spent its life in the dark, was very potent in its charm; therefore wear

round the neck the paws of a fresh killed animal, the right for a tooth on the right side, and the left for the left.

Graveyards too had their supernatural power. Cut a piece of sod from the cemetery, blow in the hole three times, (the sacred number) and replace the sod in the name of the Trinity. Or, if you don't like this, chew peas and spit them into a newly-made grave, or failing that, the mouth of a frog.

The pear tree had such virtue that it was only necessary to touch it and repeat a rhyme which varied in different countries. Licking the upper stone of a grist mill was very popular at one time in Assyria; but it was easier to put the shoe, stocking and trousers on the right leg first, and quite as efficacious. In Shropshire, on the contrary, it was the left.

There are many authentic records of the "married man's toothache", a sympathetic pain while his wife is pregnant, and which disappears when the child is born. To have the offending tooth extracted during the pregnancy was very dangerous to the wife.

SAINT APOLLONIA

Ancient Egypt placed each organ of the body under the protection of a god, a custom which was taken over by the Christians with certain modifications. This is seen in the signs of the Zodiac. Aries for the head, Taurus for the neck and shoulders, and so on to Pisces, the feet. In later times these places were usurped by the Saint of the Christian calendar, St. Otilia replacing Aries and St. John, Pisces. By easy transition, saints who had special protective powers increased indefinitely. Thus, it came to pass, because of the very nature of her martyrdom, St. Apollonia became the patron saint of dentistry and those who care for the teeth, and gave special protection against toothache.

In the great persecution and massacre of Christians in the Roman Empire A.D. 248, Alexandria looked like Coventry after a bombing. Apollonia "a virgin stricken in years" was imprisoned, her jaws broken and her teeth knocked out. As the faggots were kindled she was given a last chance to sacrifice to the old gods, but instead she hastened her death by jumping into the fire. As her popularity grew, the story of her immolation changed, till by the Middle Ages it was almost unrecognizable. Not until the 16th century do we find any mention of her in the breviaries as a patroness of the teeth. After this, however, the cult of Apollonia grew apace, with great traffic in her relics. Contagious magic entered into the manufacture of some of these; when pieces of cloth or other objects were brought in contact with portions of the body of the dead martyr, they took on supernatural power. Largely because of the revenue the relics brought to the Church sheltering them, all kinds of unscrupulous forgeries were perpetrated. The teeth on exhibition, for instance, scattered all over Europe, numbered many more than the physiological thirty-two, and there were several mandibles, two in Cologne. The same was true of many other saints. In one reliquary there was said to have been a skull with the legend, "Head of John the Baptist at twelve years." Those suffering from toothache did pray, and still pray to St. Apollonia, whose day is February ninth.

Because the teeth contained supernatural force, (how else could they remain so long after the death of the body?) the earliest codes exacted severe penalties for one who by accident or design deprived another of his teeth. The Hebraic dictum "a tooth for a tooth" was an echo of this idea many centuries after it was formulated. In the Middle Ages it was an open question whether Christianity attached more importance to

the immortality of the soul or to the resurrection of the body; and so the ill repute of the dentist, surgeon, and executioner of early days whose craft involved the shedding of blood. And hence, too, the common practice of preserving extracted teeth so that the owner may not appear without them at the Judgment.

The necklace of human teeth worn by the witch doctor of South Africa was symbolic of his power over life and death, "for" said he, "when the teeth appear, life *is*; when they are gone, how far off is death?" For the same reason the teeth of holy persons were esteemed highly. The tooth of Buddha was once sold to the King of Burma for millions.

Gamblers carry badger teeth in America and Europe, and tiger's teeth in Monte Carlo.

Now what is the philosophy underlying all forms of superstition? They dated back far beyond the Christian era and in Europe were later modified to suit the teachings of the church. In ancient Egypt, the mouse was regarded as an antidote to death, and hence the value of laying the split body of a mouse on the gums, of biting off the heads of mice or of making a necklace of mice for teething. The mouse, too, in some confused way was sacred to the sun, as were peony roots, henbane and the ivy; and in the continual contest between light and darkness, the patient thought it wise to invoke their sacred properties and, like Dr. Johnson in this matter, be on the safe side. Hyoscyamus probably did give some relief from toothache, not from its fabulous properties, which killed the imaginary worm, but from the action of the hyoscine and the wine in which it was dissolved.

Primitive man was capable of little abstract thinking and it took aeons of concrete knowledge before he realized that death was the natural and inevitable ending of life. Disease had no visible or

palpable cause so it was attributed to the supernatural. Hence came the magical devices which are the parent of scientific medicine. All those afflicted in any way were possessed of an evil spirit. Toothache was a fiend that attacked the mouth of man, and therefore must be exorcised by the magician's most potent weapons, the incantation and the charm. Loss of teeth was a great catastrophe to primitive man and was much more common than we usually believe, if we can judge from the evidence of ancient skulls. It meant loss of virility, for which the unfortunate was pushed out of the tribe.

Robert Bruce lost his upper incisors many years before his death, from pyorrhea, and probably lisped. Queen Elizabeth kept her cambric handkerchief in front of the "blasted forest of diseased stumps," while Cleopatra was toothless and probably had halitosis.

A careful study of "white" magic uncovers at least two major principles and perhaps several minor ones. The first is the law of similarity, by which is meant that the effect resembles the cause. If for instance, a piece of meat is placed in a bag and hung around the neck, the toothache will leave as the meat decays.

The second is the law of contact—things which have once been in contact continue to act on each other at a distance after the physical connection has been severed. The baby's tooth is placed in a mouse hole so that the new tooth may be strong. The African wears a lion's tooth to give him courage, and Breboeuf's Iroquois murderers ate his heart for the same purpose. Or the shed tooth must be hidden because it still has the power to influence its possessor even after the contact was broken, but charms and rituals could render this ineffective. A variant of this law allowed a symbolic equivalent to be deposited, one particularly useful in toothache, for it avoided extraction. When the gums were poked

with a splinter or an iron nail to capture the demon, the splinter or nail, preferably one from a coffin, was driven into a tree, or a door. This may have some relation to the Crucifixion, but it is certainly pre-Christian in origin and prevailed chiefly among Teutonic peoples. Sir Kenelm Digby recommended it very highly and averred that "You shall never again have toothache in your life."

This formula was sometimes combined with written charms, and holy days. The Bavarians, for example, took a hobnail and went on Good Friday to a place where three roads met. They then wrote with the nail on the ground "Rex, Pax, Max, ppo in folio" and drove the nail into a door.

It was also possible by magic to transfer the toothache to another person by placing a broom on the floor of the church. The first person to pass over the broom becomes the new possessor of the toothache.

There was a common symbolism connecting a great many of these superstitions to the early church—hiding behind the altar the splinter which had prodded the demon; performing the ceremony on a holy day, and reciting parts of the sacred ritual, as the pater noster, and calling on St. Apollonia or the Trinity. The authority of religion was sometimes beneficently used to enforce practices that race experience had found vital, as in the case of pregnant women among South American Indians who eat sea food as a religious duty.

The most deeply rooted desire in the human breast, dating back long before man crossed the threshold of recorded time, has been immortality "serene in changeless prime of body and of soul." Man therefore explored the unknown, seeking the elixir of life. There seems always to have been this everlasting credulity of man and his prejudice in favour of the abnormal, mystic and super-

natural. Sometimes we are not fair to those who have trod the rough road before us, and we forget that we are not creators but only beneficiaries under the will of our fathers. We are inclined to eliminate all the accumulated wisdom of the ages if we cannot explain it by laboratory methods, and to reject much ancient wisdom because of our prejudice against so-called savages. Superstitions about teeth were a measure of the times. As dentistry progressed in line with other

avenues of human venture, the grossest errors were dropped, till today sees the minimum of magic in relation to the teeth, certainly a great deal less than in many other fields of medicine. Magic, the bastard sister of science, is but the result of a mistaken association of ideas. Let us therefore regard with tolerance those ancient thinkers who missed the truth by so little. We may need that mercy ourselves some day.

Practical Occlusion for the General Practitioner

by W. J. LINGHORNE, D.D.S., New Liskeard, Ontario
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CROWN AND BRIDGE

THE importance of occlusion has long been recognized when replacing teeth by fixed bridges. We are still in the field of the occlusion of the natural dentition; in fact we are replacing parts in it. Therefore, it can easily be seen that a knowledge of occlusion is even more essential in this field.

The ideal would be to establish, first a smooth-sliding path in whichever slide the bridge is to be placed, and then to have the patient grind in the bridge until it fits smoothly into the slide.

Unfortunately, we cannot always equilibrate the whole slide first, but we cannot disregard the occlusion altogether. If we do, we run into serious difficulties. Often teeth already in traumatogenic occlusion will be used as abutment teeth. The added burden will increase the rate of destruction in the supporting tissues and the abutments will often be gouged or worn through, causing grief to both patient and dentist. Even the public are aware of the troubles encountered in bridgework. Many times patients have

told the writer that they do not wish to have a fixed bridge because they have heard that it soon causes the loss of the teeth to which the bridge is fastened. If we cannot adjust the whole slide, we can adjust the occlusion on the abutment teeth. By doing this, we do not use teeth in traumatogenic occlusion as abutment teeth, and we avoid the attendant ills described above. This, at least, protects our bridges, makes them more comfortable and causes them to last longer. Both these methods (the ideal and the alternative) permit the patient to finish the occlusion of the bridge by using the chewable, abrasive material. This is used according to the slides into which the bridge is placed. For example, a bridge from the first bicuspid to the second molar is ground into the chewing slide. Of course, it should not interfere in the protrusive slide but this does not happen in most cases. A bridge in the anterior region may interfere in both the chewing slides and the biting-off slide. A stone must be used to clear the chewing slides and then it can be ground into the protrusive

slide by the abrasive material. The abrasive material is very efficient in grinding in bridges, as gold is softer than enamel and is ground in more quickly.

Thus, a few minutes spent in examining and adjusting the occlusion on the abutment teeth may save the dentist and the patient future worries. The grinding in of the bridge by the patient removes many inaccuracies in the occlusion that are bound to occur in the construction of the bridge.

If the occlusion is such that the abutment teeth cannot be ground out of traumatogenic occlusion, replacement of the missing teeth by a fixed bridge is not suitable in this case and the teeth should be replaced by a tissue-supporting denture. (See footnote 5.)

Summary

The ideal method would be:—

(1) To equilibrate the slide, (whether the chewing slide or the biting-off slide,) into which the bridge is to be placed.

(2) To construct the bridge to fit into this slide and then to have it ground in by the patient so as to establish a non-interfering, smooth-sliding articulation.

If, for various reasons, the occlusion cannot be equilibrated first, it is suggested:—

(1) That the occlusion be equilibrated on the abutment teeth. This means that the abutment teeth are examined in the

eccentric position (the first part of the working-stroke) and ground so they do not contact in this position before at least some of the remaining teeth. In other words, be sure that the abutment tooth alone does not take the full weight of the bite in the first part of the working-stroke.

(2) That the construction of the bridge and the grinding in by the patient be done in such a way that there is no interference in the working-stroke.

PARTIAL DENTURE FIELD

A knowledge of occlusion of the natural dentition is even more essential in the partial denture field. If the occlusion is neglected in the design and construction of partial dentures, many troubles will be encountered. Teeth, already in traumatogenic occlusion will often be used for clasps, with occlusal rests. The added load will increase the rate of destruction in the supporting tissues of the clasped tooth.

The most serious trouble in this field is encountered when the occlusion of the artificial teeth does not harmonize with that of the remaining teeth. Interference in the occlusion of the artificial teeth is much more serious because of leverage. This causes a severe force to be exerted almost at right angles to the clasped teeth and, in many cases, the trauma causes

5. A few years ago a lady consulted the writer because of sensitiveness in an upper left cuspid. It had been used as an abutment for a bridge from the cuspid to first molar. The bridge was well constructed except for one thing—no consideration had been given to the occlusion except in centric relation. This caused the bridge to be uncomfortable and the neck of the cuspid to become very sensitive. Before consulting the writer the patient had returned several times to her own dentist who, because of the erosion and sensitiveness primarily due to the occlusion, had placed in an inlay at the gingival of the cuspid. However, the erosion had continued and a larger inlay was necessary. The general feeling of discomfort when chewing on that side still continued. On examination it was found that the cuspid carried the whole weight of the bite until centric relation was reached. The separation in the molar area in the eccentric relation was so great that no contact would be obtained in that area by grinding. It was impossible therefore, to bring any other teeth in to share the load with the cuspid in the first part of the working stroke. The result was that at a later date, it became necessary to remove the bridge. This case is reported because of the fact that, although much care and skill were used in the construction of the bridge, owing to the neglect of the occlusion, the dentist had a dissatisfied patient who considered she would have been better never to have had the bridge. It also illustrates the fact that in cases in which the occlusion of the abutment teeth cannot be properly equilibrated, fixed bridgework is not a suitable way to restore missing teeth.

them to become loose and infected in far too short a time. This is the greatest reason for clasps breaking. The rocking of partial dentures is nearly always caused by the occlusion. (See footnote 6.)

What in reality limits the time of usefulness of the average, good, partial denture? It is nearly always the loss of the remaining, natural teeth. The most common cause of their loss is periodontal disease, because if the occlusion of these teeth is traumatogenic, the rate of destruction in their supporting tissues is much more rapid, since they carry an increased load owing to the loss of the teeth removed. The partial denture, for obvious reasons, seldom carries its share of the load of the occlusion.

It is seen that the time of usefulness of a partial denture and the comfort with which it is worn, is very closely bound up with the occlusion, while much of the grief (loosening of the clasped teeth, breaking of the clasps, rocking of the dentures and periodontal disease in the remaining teeth) is largely due to neglect of the occlusion.

One of the most essential parts of the

construction of a partial denture is the harmonizing of the occlusion of the artificial teeth with that of the remaining teeth. This can be accomplished by having the operator make certain that there is no interference, and then by having the patient grind it in perfectly himself, establishing that smooth-sliding action which is so efficient and beneficial. Any interference in the chewing slide in the anterior part of the mouth is remedied with a stone. Roughness of a slide is very traumatogenic.

Patients should be told why it is more necessary now to equilibrate the occlusion of the natural teeth. The writer always makes a separate charge for this work apart from that of the partial denture, explaining that this is preventive work in pyorrhea. This work often takes very little time to do as there are fewer teeth.

Summary:

(1) Equilibrate the occlusion of the remaining teeth and construct the denture so that it fits into the various slides. Have the patient grind in the occlusion of the artificial teeth in order to remove any interference and roughness in the slide.

6. The following case illustrates the fact that the rocking of a partial denture is often due to the occlusion.

Some years ago the writer constructed an upper partial denture for Mrs. X, supplying three posteriors on each side and a left lateral. The denture was placed in the mouth; the occlusion roughly checked in centric relation and the patient given another appointment in five days time when the writer would have sufficient time to make any adjustment necessary. On the patient's return, she assured the writer that everything was fine. The occlusion was checked in centric relation and found to be as it should be; the clasp tension was correct and the aesthetics suitable. The patient then mentioned that, except for a rocking of the denture when eating, it was quite satisfactory. For the first time the writer considered applying the lessons learned in occlusion in periodontia, to the partial denture field. The patient was asked to close in the left eccentric position and it was observed that the only teeth contacting in this position were the artificial teeth on the denture. Naturally then, every time the patient closed in this position the denture rocked. The same condition occurred on the right side. The artificial teeth were then ground so that they contacted at the same time as the natural teeth in the right and left eccentric positions; the teeth were rounded off in a manner similar to that suggested after grinding the natural teeth in the technique of occlusal equilibration, and the case was ground in by the patient using the abrasive material.

The result was that all rocking of the denture was eliminated; hence much of the strain in the clasps and abutments was removed. Since much of the tendency to displacement was relieved, it was possible to reduce the tension on the clasps. (Having the artificial teeth directly over the ridge is important in this regard.) The function of the clasps then was only to hold the case in position. No trauma from the bite would be placed on the abutments. From then on the writer examined as many as possible of his previously completed partials, and occlusal adjustments were similarly made. In every case in which the occlusion was rectified, the patients remarked on the decidedly better feeling of comfort of the dentures. A few minutes time in the office was all that was necessary for each case.

The occlusion of the artificial teeth should then fit into, and harmonize perfectly with that of the natural occlusion.

(2) If this cannot be done, equilibrate the occlusion of the teeth selected for clasps, as in fixed bridgework. Construct the partial denture so that it does not interfere in any part of the full working stroke in the three functional slides. In case there is interference in the finished denture, a little grinding with a stone in the eccentric positions of the three working slides is often sufficient to remove it. Have the patient himself grind out all minor inaccuracies and roughness in the slide so that the occlusion of the restoration harmonizes smoothly with that of the remaining natural teeth. If the occlusion of the remaining, natural teeth is such that they are subjected to severe trauma which cannot be relieved, it might be well to reconsider the advisability of partial dentures in this case.

FULL DENTURES

The writer believes that the lessons learned in the study of the occlusion of the natural dentition can be applied to and are of real value in obtaining occlusal harmony in full dentures.

The prosthetists have long been aware that interference in the anterior region is undesirable. Many, therefore, recommend an end-to-end bite in the anteriors because this reduces the tendency of the denture to tip and patients get along quite well without any overbite.

What actually does this mean? It means that, owing to the modern diet and customs of eating, an efficient shearing action is not necessary in the incising function; more important still the protrusive movement is not used in this function, because if the jaw were protruded, the anteriors would not meet, having an end-to-end bite in centric relation. If the protrusive movement is not used in the biting-off function, and we know it is not used in the chewing function, why

should it receive much consideration in the setting up of the teeth or in the equilibration of the occlusion? It is the writer's belief that, when an end-to-end bite is used, the protrusive bite can be practically disregarded.

All that seems to be necessary then to obtain occlusal harmony is to obtain a smooth-sliding, non-interfering occlusion on the posteriors in each chewing slide, with one or two points of contact on the balancing side, as the end-to-end bite takes care of anterior interference in the chewing slide. (Many men think even balancing contact unnecessary, if the direction of the load is such that it is sustained between the ridges. This prevents tipping.)

If an overbite is necessary, increase the over-jet so that the anteriors do not interfere in the chewing slides. Then prevent tipping when the jaw is protruded for biting-off, by having the three point contact (anterior, molar, molar) in this position. No other teeth should contact in this position as the posteriors should not interfere in the biting-off function. Then proceed with occlusal equilibration as in the end-to-end bite. Of course, it is expected that the other points fundamental in the construction of full dentures, such as having teeth directly over the ridge and correct occlusal plane are attended to.

From the study of occlusion in the natural dentition given previously, and from the observations made on full dentures, it seems logical to conclude that occlusal harmony may be obtained by using exactly the same principles and methods as were used to obtain occlusal harmony in the natural dentition (as outlined in the first paragraph in the section on "Basic Methods of Adjusting the Three Slides"), except that the teeth can be set up as desired rather than ground, (though if necessary this may be done by grinding). Then if the teeth, either by being

set up or by being ground, so that those in the area first bicuspid to first bicuspid on the opposite side are not interfering, or even better, are slightly out of occlusion in the chewing slide, and if interference is treated in a similar manner on the balancing side, the patient can grind in his dentures by the use of a chewable abrasive material.

While this method may not give ideal results in obtaining maximum efficiency, it may be of value to some men as a practical method of overcoming occlusal troubles in full dentures. The writer is well aware of the limitations imposed on the general practitioner by the financial status of some of his patients and values this method because it takes little office time. To the man who desires an improved method by which the shearing efficiency of the teeth is increased, and less grinding in by the patient is necessary, leaving more of the anatomy of the occlusal surface intact, the following technique is suggested:—

(1) Take the bite in centric relation as usual, and transfer to an articulator permanently set at about 15°.

(2) Set up the teeth in the usual way with this exception: do not have the anteriors interfere in the chewing slide (right and left laterals). An end-to-end occlusion will often take care of this. If an overbite is necessary, obtain the clearance by increasing the overjet. Establish the three point contact in the protrusive bite (anterior, molar, molar).

(3) Put wax tryins in the mouth. Check to see if centric bite is correct. If the overjet is used, check the three point contact in the protrusive bite; it may be necessary to raise or lower the anteriors or molars.

(4) Check right lateral bite in the eccentric position for high or interfering teeth. These can be lowered or tipped so that all the posteriors contact approximately in this position. While still in

this position, have at least one point of contact on the balancing side, if desired, but in any case make certain that there is no interference in the chewing stroke on the balancing side.

(5) Check the left side similarly.

(6) Vulcanize and finish in the usual manner.

(7) Place completed denture in the mouth; check the right and the left chewing movements for any major interference due to possible movement of the teeth in vulcanization. Hold the dentures in the mouth with Corega and have the patient grind in a smooth, non-interfering path in the chewing slide, using the abrasive material from the cuspid back, in the manner suggested for use in the natural dentition. It is sometimes necessary at first, if the slide is very rough or bumpy, for the patient to steady the dentures with the fingers until the worst of the interference is worn out.

By this means the causes of the tipping of dentures, sore spots and other troubles resulting from occlusal disharmony, are eliminated. An efficient shearing action is established which increases the efficiency of the apparatus and therefore reduces the amount of force required for mastication, thus decreasing the load on the ridges (the straight crushing action is the least efficient manner of using force and is destructive to the ridges). Only by abrasive action can this efficient shearing action be obtained, as no other method gives such perfect co-ordination of the cutting surfaces.

The use of an abrasive material that can be chewed is essential, as the patient will then make chewing movements identical to those made when chewing food. When abrasive pastes are used, the rubbing movements wander. The abrasive in the material used for artificial dentures, without being too harsh or unpleasant to use, is the fastest cutting abrasive available. It cuts much faster than that used for the natural dentition.

ECONOMICS

The writer would like to touch briefly on the economic phase of this work. Having had experience, a general practitioner will find that, for the average case of occlusal equilibration, he will require about one hour to one hour and a half office time. This will generally be divided into three or four appointments. In the crown and bridge, partial and full denture fields, very little extra office time is used. This is more than compensated for by fewer appointments required for after adjustments.

Many men will find the work interesting, introducing a pleasant change in the routine of general practice. Incidentally, it will open up a profitable field of service for which there is an ever-growing demand from our best type of patient—those who wish to keep their teeth and are able and willing to pay for the service. The public is realizing more and more the value of preventive medicine and preventive dentistry. A greater percentage of our patients now appreciate the value of their own teeth as a social and business asset and are much less resigned to losing them than were patients twenty years ago.

Many factors such as tooth paste advertising and the unfortunate experience of relatives and friends, have made the public pyorrhea conscious. They realize that periodontal disease, besides causing the loss of teeth, is a menace to the general health. There is a growing awareness on the part of the medical profession in this regard and many doctors send patients to the dentist for treatment of this disease. Dentists, able and willing to meet this constantly increasing demand will naturally be more successful. The writer would remind the man, at present kept busy in his practice by other phases of dentistry and who, therefore, may ask himself why he should undertake this work, that perhaps he knows of once large practices in both medicine and den-

tistry which have seriously dwindled because of the failure of the men to anticipate and serve the changing demands of the public.

NATIONAL DEFENCE

In these times with the question of National Defence continually in everyone's mind, one is apt to consider any work in terms of its value to the war effort.

Dentistry's responsibility is greater in this war than in any previous one. In previous wars, the purpose of a dental corps was fulfilled if the troops were relieved of toothache and had sufficient masticatory apparatus to chew their food. The purpose of the dental corps in this war is also to prevent or relieve pain, and to provide a masticatory apparatus sufficient to chew food; but it also has the added responsibility of preventing the mouth from being or becoming a focus of infection.

It is now generally accepted that foci of infection are often a primary factor in causing such ailments as neuritis, arthritis, infection of the eyes, heart, kidneys, gall bladder and digestive tract. Furthermore, foci of infection lower the general health and the resistance of the body to disease. The mouth is probably the most common seat of foci of infection; in fact a prominent medical authority stated that ninety percent of the foci of infection is "above the collar." Thus dentistry is called upon to assume an important share of the responsibility for the general health and physical efficiency of the army. Good oral health is now considered essential to good general health.

The oral health of the army depends, to a large extent, upon the standard of dentistry or quality of the service provided by the dental corps. This is affected by many factors but briefly the standard depends on the ability of the individual dentist to do the work, and secondly the type or class of service he is allowed to give. This in turn depends on the amount

of funds made available by the authorities.

Many men seem to believe that, if the standard of dentistry in the army was equal to the general standard of dentistry in civilian life, dentistry's responsibility for playing its part in winning the war would be fulfilled. The writer believes that this standard is not high enough, at least not for many branches of the army personnel.

The army demands a much higher standard of physical efficiency than is necessary in civilian life, and a much greater price is exacted for lack of it. For example, it probably costs ten thousand dollars or more to train a pilot. On active service he is in complete charge of a machine that costs from \$25,000 to \$300,000 and which operates at 300 to 500 miles per hour. A 10% loss of his physical efficiency may result in the complete and total loss of both the pilot and the machine, and possibly the loss of three or four other highly-trained members of the crew. Very seldom in civilian life are such demands made upon the physique of the individual and the penalties of a lowered physical efficiency are seldom so definite and expensive.

A comparison in civilian life in which the physical efficiency and the co-ordination of hands and eyes are needed, can be found in the case of professional athletes. One often reads in the papers that the batting average of a ball player has been ruined by a dental infection, or that a pitcher has lost his effectiveness from the same cause. They become normal again with the removal of these infections. The same is true of other athletes. With this comparison in mind and knowing the importance of air power, we can readily see that the standard of dentistry, at least for airman, should be as high as possible.

Infection in the mouth results from caries and periodontal disease. Preventive

procedures are common practice in operative dentistry to take care of caries, and infections from this source are greatly diminished. But very little preventive work is performed in the periodontal field, and yet some of the most serious foci of infection observed in practice are from periodontal disease. Quite often serious systemic disturbances have been observed even from one or two pockets.

The most rapid progress of the disease, observed in normal patients, is due to neglect of the occlusion in the design and construction of bridges and partial dentures. One or two years are often sufficient to change a fairly normal abutment or clasped tooth to an infected one. It would seem therefore that, while a knowledge of occlusion is necessary in the practice of all phases of dentistry, from the military viewpoint, it is more important still in this field. Every day many bridges and partials are being made in the army. Let us at least see that our restorations in the mouth are aids to, rather than evil influences upon the oral health.

This is a total war. Our scientists, doctors, dentists and engineers are pitted against those of the enemy. Let dentistry do its part to the best of its ability. It is the duty of the profession to bring the facts of the importance of dentistry in the war effort to those in authority, so that adequate funds and personnel will be provided to make the standard of dentistry, in at least some branches of the army, as high as possible. Money spent on raising the physical efficiency of army personnel to the highest possible standard in at least certain branches of the service where the training and equipment used is so expensive and demands so much from them, is obviously sound economic procedure.

In summing up, it might be logical to make the following concrete suggestions:—

(1) It would seem that, as the Air Force demands the highest standard of physical efficiency, it therefore demands the highest standard of dentistry.

(2) In order to attain this high standard, preventive or curative methods to control both caries and periodontal disease should become standard procedure for airmen. The medical profession goes to a great deal of trouble and expense to weed out pilots in training who are not, or may not be at a later date, likely to meet the physical standard required. All their efforts may be nullified if a man having in his mouth foci of infection from periodontal disease is allowed to proceed. It must be remembered that even a mild case showing pockets $\frac{1}{8}$ " deep around the teeth, exposes four square inches of toxic absorbing surface to a concentration of bacteria and their toxins. This is quite sufficient to impair his physical efficiency seriously, for example his eyesight.

(3) Either the general practitioners in the army should be trained in these standard procedures, or every airman should be examined and treated, if necessary, by a periodontist. (When necessary the medical profession have not hesitated to call in a specialist.)

(4) Occlusal equilibration in at least the fields of crown and bridge and partial dentures should become standard procedure in dentistry in all branches of the army. If this is not done, many partial dentures or bridges may quickly cause a focus of infection.

CONCLUSION

The practice of dentistry has changed greatly in the past twenty years. When it became generally recognized that foci of infection in the mouth are a serious menace to the general health, it was obvious that a new era in dentistry had begun. To see that the mouth does not become such a menace is the first duty of the dentist. The public have realized

the value of teeth as a social and economic asset and are much less willing to part with them. The problem facing the dentist today, then, is to see that his patients retain their teeth without having the mouth injurious to the general health.

To meet this situation a new mental outlook on the part of the dental profession is necessary. The emphasis must now be placed on preventive rather than reparative dentistry. Reparative techniques and procedures are still important, but they must be based on a sound, practical knowledge of the biologic considerations. They have an important place in the broad plan of preventive dentistry as an aid in the preservation of the oral health.

It would seem then that a knowledge of occlusion is essential for the average general practitioner and for him occlusal equilibration should become standard procedure. But in order that this may come about, a campaign of public education should be instituted for the purpose of acquainting the public with the seriousness of periodontal disease and the need for occlusal equilibration as a preventive and curative measure.

The future prestige of the dental profession depends, to a large extent, on the creation and support of a soundly informed public opinion and on the ability of its individual members to render the service demanded of them.

The writer gratefully acknowledges the help received from members of the departments of Periodontia and Prosthetics of the University of Toronto, and from other members of the profession.

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PRINCE EDWARD ISLAND



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The Doctors Mayo

One of the great and human stories of our time, *The Doctors Mayo*, appeared early this year and since then has been one of the best sellers in the non-fiction class in many of our cities. This book was written by Helen Clapesattle, Editor of the University of Minnesota Press, a story only made possible following the death of these three giants in the medical profession, on account of strict conformity to medical ethics during their life time.

Dr. William Worall Mayo was an Englishman from Eccles near Manchester, who in 1845, at the age of 25, came to America and later became one of the pioneer physicians of the Middle West. How he and later his two sons developed their unique practice in the small town of Rochester, sharing all they had with one another and with the world until they had built up their famous international institution presents a fascinating picture of a hundred years of medical practice. In this book one reads of the great medical centre which bears their name, of the origin of the Surgeons Club and of the Mayo Foundation and of the growth of this extraordinary practice which eventually drew the most distinguished doctors and patients from the ends of the earth.

The writer's first contact with the Mayo Clinic was about twenty-five

years ago before the present celebrated clinic-building had been constructed. Working in one of the sections of the even then famous clinic was an old time school friend who had been serving in this institution for about ten years. The writer said to this friend, "Why don't you return to the city of your boyhood and practice there? You would be a leader in the community instead of just one of many here in Rochester. With your experience and skill you would have a splendid practice in a very short time." His reply will never be forgotten. "What you say may be true but you have left out the most important consideration of all, which is, that I could not practice as fine medicine and surgery as I do here. In this Clinic I have access to the service of the finest pathologists, bacteriologists and technicians in the world. Back home I would not have access to such service and I would be handicapped." Such ideals have built up this great institution to its present peak of perfection. As a result of this conversation the writer has held a deep-rooted respect for the Mayo Clinic ever since and has visited the institution on a number of occasions both as patient and visitor.

With this background this new book was perused with particular interest and in reading it a number of statements impressed themselves on the writer's mind which he desires to pass on to the dentists of Canada.

Doctors Will and Charlie Mayo were fortunate in their choice of parents. Their father was an educated intelligent gentleman, energetic, honest and professionally able. He knew and loved good books and took a keen interest in his sons' development. Their mother was never known to say a hateful word about anyone. She was energetic and resourceful. When the Minnesota Sioux Indians took the war path the Mayo family lived in Le Sueur and were in danger of being annihilated while the Doctor was carrying on his duties among the troops. Mrs. Mayo organized the women, in self-defense, and always carried a gun in going from the house to the barn. Those were difficult days and the Mayo's had to practice strict economy. The boys worked on the farm. They swept out the office and dusted it before going to school. They picked up chemistry and physics from their father and later worked in a drug store from 7 a.m. to 6 p.m., or even 9 p.m. at times, for \$4.00 a week. On long drives with their father, as he carried on his practice, they were introduced to the art of diagnosis on the basis of clinical observation. Later they were taught to cut and mount sections for the microscope and also instructed in the rudiments of gross pathology. At a very early age they would observe and even assist at operations. As Will said, "We were reared to medicine as a farmer boy is reared to farming." The father's advice to the boys was, "Don't ever do anything because other people do. Do it because it is right." The father believed that a man with unusual physical strength or with unusual intellectual capacity or opportunities owed something to the people. He should do for others in proportion to his strength. In following this teaching the brothers won the plaudits of the world.

THE MAYO CLINIC



The boys were given the best education available even when the family income was chronically insufficient. Do we send our sons to the best institutions or to the nearest or cheapest? Some time previous to the commencement of the present war a prominent economist advised men to follow three rules: first, if you have good health make every effort to keep it; second, if your health has failed make every effort to get it back; third, give your children the best education possible for they will likely have to keep you in the end. Yes, education is most important. Furthermore, the Mayo brothers never for a moment entertained the delusion that their education was complete, that they had no more to learn. One of the most valuable contributions the father made to the career of his sons was the insistence that no matter

how busy they might be or how exacting the calls of duty, they must give at least one hour a day to reading and study. Dr. Will never broke this habit, most of his reading being given to medicine, and to the end of his life kept scrupulous account of his reading time. Unavoidable debits were always paid in full. This principle was also carried out with the staff of the Clinic, each man being given a half day or a day a week for reading and study. Then again every Tuesday evening some two hundred young doctors meet with their teachers to discuss medical problems.

The Mayos believed that while reading was good, seeing was better, and being full of ambition they made time for travel and study and seized upon every opportunity to learn from others. They were never averse to confessing ignorance if, by so doing, they could learn something. "No man is big enough to be independent of others," was the precept the old Doctor gave to his sons. They early established the habit of spending a month or more, at least once a year, in intensive observation of other surgeons' work. Dr. Will usually went away in the fall and Dr. Charlie in the spring. For some years, week after week, both brothers made the journey to Chicago on Wednesday night in order to attend Dr. Fenger's clinic on Thursday. At times they stayed over to meet with a group to discuss medical literature and they never relaxed their custom of bringing back some specific contribution from every trip they made. They were never concerned about any loss of practice which might follow as the result of their absence from Rochester. Could not most dentists take an important lesson from this practice?

"Dr. W. J. Mayo believed, as have enterprising business and professional men since the days of the Renaissance, that investment in the appearance of success pays good returns." Let us accept this lesson also and see that our offices appear up to date and successful. Our dental dealers can render us great assistance in this respect.

The Mayos kept step with developments in every field. Their ideals were high. They deplored the practice of fee-splitting and "considered this barter in sick men a damnable business and never hesitated to say so."

As popularity at home as well as abroad increased, many evenings were given over to social affairs, which activities began to demand too much of their time. If they were to have any home life at all something had to be given up and it wasn't their work. Then, too, they had to have time to write and prepare addresses, for from the beginning, these brothers gave serious attention to reporting their work in professional circles even though both writing and speaking were hard for them at first. However, they forced themselves to conquer these obstacles.

Of all the wonder stories in the realm of human achievement hardly any can surpass that of the growth and progress of the Mayo Clinic. Here were two country boys who made an obscure western village a shrine of hope to suffering humanity throughout the civilized world. They may have chosen the right parents. They may have been born at the right time. They may have

been given the opportunities but how many of us seize even a small fraction of our opportunities!

For the average layman this book is too long but for the dentist this could not be. He should read it and read it again and revel in every page of it. One could hardly do this without gaining inspiration and a host of ideas which are most applicable to the successful practice of dentistry, so read and absorb and profit by this "warm and human story of three remarkable men whose lives span a century of medicine."

BOOK REVIEW

Modern Methods of Tooth Replacement

by Jacob R. Schwartz, D.D.S., Member of Advisory Board on Vocational Education, Board of Education, City of New York. 1881 original illustrations executed and drawn by the author and comprising 1567 drawings, 357 photographs and 17 charts. 748 pages. Published by Dental Items of Interest Publishing Co., Inc., 2921 Atlantic Avenue, Brooklyn, N.Y. Price, \$10.00.

This brilliant new text, just off the press, is a categorical treatise on the manifold methods by which one or more missing teeth may be replaced, employing any of the approved systems of construction. The approach to the everyday problems of restorative dentistry is a practical one and this book represents an integrated volume on prosthetics from a single authoritative viewpoint.

The author's main objective has been to aid dental practitioners as well as the student, by supplying in complete detail helpful information in diagnosis and technique, economics, patient psychology and practice management.

The following are some of the chapter subjects: Diagnostic Survey: Critical Study of

Abutment Possibilities: Survey of Edentulous Spans: Fixed Bridgework, Precision Slotted Attachment Removable Bridgework: Partial Dentures: Clasps: Pontics: Model Duplication: Plastics in Dentistry: Gold and its Alloys for the Construction of Restorations: Impression Methods: Anterior and Posterior Fixed Restorations: Removable Bridge Construction with the Use of Slotted Attachments: Operative and Prosthetic Technique in Partial Denture Construction. In recent years there have been many improvements in methods, procedures, materials and appliances. It is recognized that unless our beautiful forms of craftsmanship are made to conform to the biological requisites failure will result. Dr. Schwartz has kept this in mind in developing his subject.

The author points out that there are numerous works on the subjects of occlusion, articulation, periodontia, root canal therapy and anaesthesia, so the text of this book is concentrated on the techniques of construction and their application to each type of restoration.

The general practitioner of dentistry should find in this book a wealth of practical suggestions which can be put into daily practice with little effort.—*M. H. G.*

CORRESPONDENCE

13, Hill Street,
Berkeley Square,
London, W. 1.
18th February, 1942.

To Dr. W. W. Woodbury, President of C.D.A.

Your letter of 16th December has just reached us safely and I know it will give our War Council very great pleasure indeed to

learn of the high sense of appreciation which you express at the visit of our representative, Mr. Rowlett of Leicester. So often has Mr. Rowlett untiringly represented the Association in distant lands that our Council had no hesitation in calling on his good nature once more to make the hazardous trip across the Atlantic, when we received the invitation from the

American Dental Association, and it occurred to us that no one could more happily take the opportunity of maintaining the pleasant relations which we have always had with our affiliated Association in Canada.

Since his return Mr. Rowlett has furnished our Council with a full account of his experiences in Canada and his impressions, all of which leave us with no doubt of the strong spirit of resolution which must in the long run result in a complete victory for the Democratic Countries.

May I, on behalf of our President and members, thank you and request that you will convey to your members our deepest thanks for the very generous hospitality and kindness extended to Mr. Rowlett from East to West in your wonderful country.

Signed, W. G. SENIOR,
Dental Secretary

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The Dental Health Service Plan

To the Editor, Journal of the C.D.A.—

The committee studying the Dental Health Service Plan has brought to our attention the fact that dental services in the past have not been sufficiently extended to serve more than a favoured portion of the public. When changes are coming fast and furiously and old standards are discarded for new ones almost overnight it is well for every member of the dental

profession to take a keen interest in the principles submitted to us by this committee. It is also our privilege and duty to scrutinize every point of the "Summary" and voice our opinion in support of the work, and if we have any suggestions now is the time to make them.

There is one phase of the dental service which does not appear in the "Summary" and may be added without changing the outline suggested by the committee. I refer to dental service for children of pre-school and school age.

Considerable work has been done to establish clinics in the cities to take care of the underprivileged children, but very little progress has been made even here, and the vast rural districts and the towns of Canada are without any kind of attention for the teeth of the children. Sporadic examinations in the public schools have revealed that the parents are not in sympathy with this work, since they would rather not know about the deplorable condition of the children's teeth when they can not afford to do anything about it.

I am of the opinion that nothing short of a completely free dental service will ever do much good for children, and I should like to suggest that a paragraph be added to the "Summary" providing free clinics for all children, rich or poor, including grade eight or nine.

Signed,—H. B. NESS, D.D.S.,
Camrose, Alta.

DENTAL CORPS NEWS

Another Mobile Dental Unit

On posting the news for this issue Dean Mason reports that St. George's Society of Toronto will present the Canadian Dental Corps with a mobile dental unit at its meeting on St. George's Day, April 23. The meeting takes place at the Royal York Hotel, Toronto and Past President Hunt will make the presentation to General Constantine, Officer Commanding Military District No. 2.

M.D. 10. Headquarters, Winnipeg

Five operators have been taken on strength recently. Capt. J. N. Tritt and Capt. C. A. Shaffer, both of Fort William, have assumed duty and are now at O.T.C. Gordon Head, B.C. The first American dentists to arrive here under the new regulations, whereby acceptable graduates, with licenses in the U.S. only, may be enlisted, are Capt. D. M. Litman and Lieut. L. A. Blumberg, both of Minneapolis, Minn.

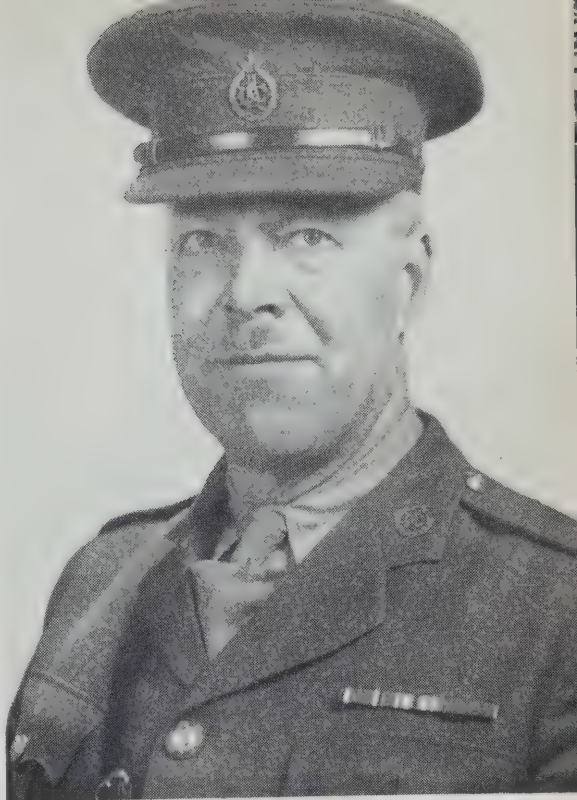
Major L. J. Stuart, V.D.

A well known Peterborough dentist has recently been promoted to the rank of Major.

Major Stuart graduated from the Toronto University Faculty of Dentistry in 1923 with the degree of D.D.S., L.D.S. He commenced practice in Millbrook, afterwards moving to Peterborough where he continued practice until his appointment in the C.D.C.

Major Stuart is well known in military circles, having been gazetted a Lieutenant in 1915 and serving overseas in England and France until 1919. After returning to Canada, he took a keen interest in N.P.A.M. units, rising to the rank of Major in the Midland Regiment. When the present war broke out, he accepted an appointment in the Canadian Dental Corps and has been adjutant of No. 23 Co'y. until his promotion.

He was a member of the Peterborough Dental Society and Peterborough Badminton Club. His many other activities include hunting and fishing.



Major E. F. Stewart

A well known dentist of Creemore, Ontario, who has been stationed at Canadian Dental Corps H.Q., Ottawa, since May, 1941, has recently been promoted to the rank of Major.

Major Stewart served overseas in England and France as a gunner with the Canadian Field Artillery from 1916 to 1919.

After graduating from the Royal College of Dental Surgeons, Toronto, in 1923, he took post graduate work in Rochester, N.Y., for a year, and was resident dentist in the Muskoka Hospital, Gravenhurst; later practising in Toronto, and moving to Creemore in the fall of 1937.

He is a member of the Creemore Branch of the Canadian Progress Club.

For the past few years, Major Stewart has been interested in the propagation of upland game birds.

Before coming to Ottawa, Major Stewart was in No. 36 Company, C.D.C., (R.C.A.F.) No. 1 Training Command, Toronto, Ontario.





Major H. L. Windrim

He was born in London, Ontario, and received his primary education at Lorne Ave. School and the Central Collegiate Institute. In 1921 he was graduated from the Royal College of Dental Surgeons in Toronto.

Major Windrim served in the C.A.D.C. during the last war, and at the time hostilities began in 1939, he was an officer in the First Hussars Regiment. He immediately enlisted in the C.D.C. and has served in M.D. No. 1, at Headquarters in Ottawa and is now in Halifax attached to No. 26 Co'y as Adjutant.

His hobbies are fishing and golfing. Previous to enlistment, he served in different offices both in Blue and Scottish Rite Masonry. Major Windrim is married and has one child.

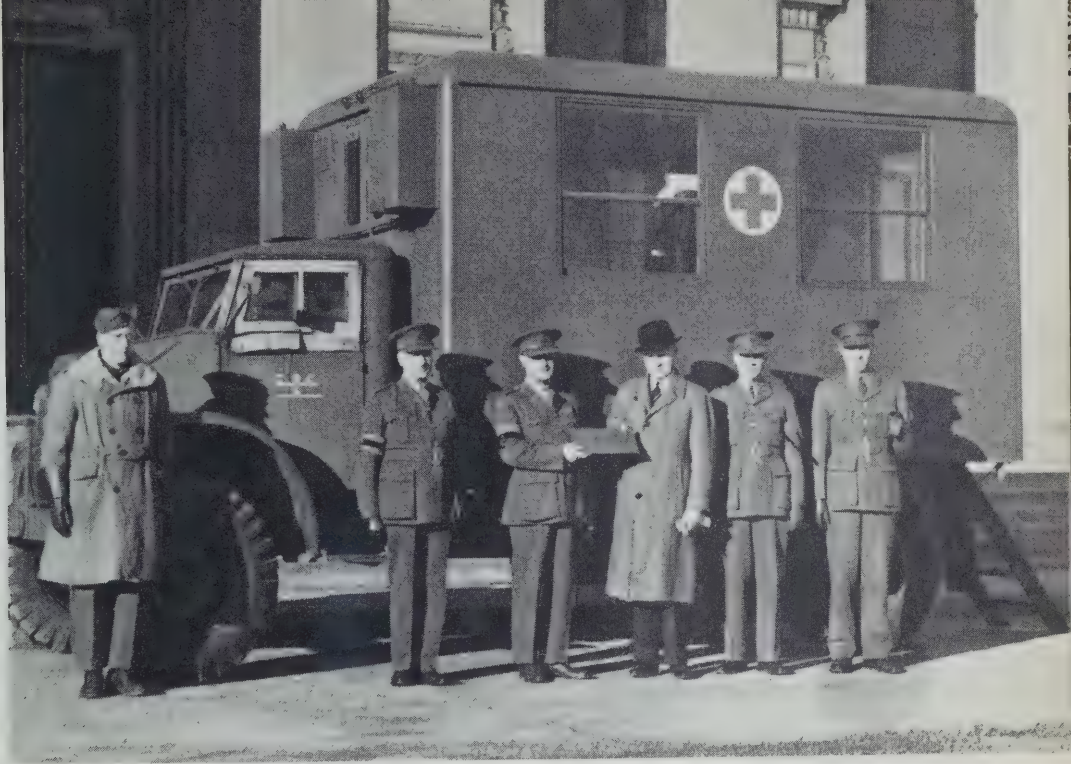


Lieut. R. D. Sheret

Lieut. Sheret enlisted as a Quartermaster Sergeant in December, 1939, with No. 31 Company, Military District No. 11, Esquimalt, B.C.

On July 24, 1941, he received an appointment as 2nd Lieutenant and was made Quartermaster of No. 31 Company Canadian Dental Corps. In November, 1941, he was promoted to Lieutenant.

Before he enlisted, Lieut. Sheret was salesman for Ash-Temple Dental and British Columbia Dental Supply Company.



Dr. C. Lloyd Jones of Grimsby, Ontario, presenting a mobile dental clinic to the Canadian Dental Corps.

Included in the presentation ceremony from left to right are: R.C.A.S.C. driver, Major D. J. Ferguson, District Dental Officer, Military District No. 2, Toronto; Lieut.-Col. D. S. Coons, Headquarters, C.D.C.; Dr. C. Lloyd Jones; Major L. A. Stirling, dental officer with No. 36 Company, No. 1 Training Command, Toronto, and Lieut. L. S. Williamson, Quartermaster with No. 36 Company, No. 1 Training Command, Toronto. In making this personal gift to the Canadian Dental Corps, Dr. Jones shows his splendid interest not only in the Corps but in our War Effort.

NEWS FROM THE PROVINCES

ONTARIO:

Faculty of Dentistry University of Toronto

The forty members of the graduating class of the Faculty of Dentistry, University of Toronto, wrote their examinations during the last week of March. All the candidates successfully met their final test and at a special convocation on April 2, their degrees were conferred upon them. It is probable that an all time record has been set by this class in that 36 out of the 40 members are now officers in the Canadian Dental Corps. Of the other 4 members, one of them a young lady from Bombay, India, Miss Teh Mina Canteenwalla was willing to join if it were possible; another a Chinese student, Mr. Chu, whose intention is to enlist when he returns

home to Vancouver and the remaining two are not eligible for military service.

Sir William Mulock, Chancellor of the University, conferred the degree of Doctor of Dental Surgery on the entire class. President Cody in his address congratulated the young graduates and said, "You are a remarkable class graduating at a remarkable time." He inferred that the men in uniform had an opportunity to share in the job of making life in Canada secure.

Lt. Col. George Cameron, D.S.O., Assistant Director of the Canadian Dental Corps, gave the graduation address. The Globe and Mail, Toronto, reports him as follows—

Referring to the remarks of Lieutenant-General A. G. L. McNaughton, in Canada recently, pertaining to the importance of younger leaders he said: "That is exemplified



Courtesy Toronto Telegram.

A group of honour graduates of Class '42 Dentistry, University of Toronto

From left to right—J. D. McLean; W. J. Pepin, winner of Albert E. Webster memorial prize and W. J. Switzer gold key; J. B. MacDonald, President of Students' Parliament; A. W. O'Hara, tied for Wallace Seccombe memorial prize; J. A. Biglow, winner of Wallace Seccombe prize for general proficiency; E. H. Loaring.

here. I hope your youthfulness will be mingled with the experience of older men. It is a great credit to the University of Toronto to see these young men come forward as leaders and officers in the forces."

Surely it was an inspiration for these young officers to meet their Commanding Officer under such circumstances and appraise for themselves something of his virtue, his talents and his ability to direct. *

The scholarships and prizes were awarded to the following successful students:

The Albert E. Webster Memorial Scholarship (Operative Dentistry)—W. J. Pepin.

The Wallace Seccombe Memorial Scholarship (Preventive Dentistry)—A. W. O'Hara and L. G. Richardson (aeq.)

The W. George Switzer Memorial Award (Prosthetic Dentistry)—W. J. Pepin.

The Wallace Seccombe Prize for General Proficiency—J. A. Biglow.

The School of Graduate Studies recommended M. S. N. Ginwalla, D.D.S., McGill, of Bombay, India, for the degree of M. Sc.

(Dent.) which was conferred on him by the Senate of the University of Toronto at the Convocation on April 2.

The following is the complete list of graduates:

xBall, A.H., Toronto; xBenson, C. A., Essex, Ont.; xBiglow, J. A., Holland, Man.; xBrett, R. O., Regina, Sask.; xBurgman, R. B., Melville, Sask.; Canteenwalla, Miss T. F., India; xCheetham, D. A. Toronto; Chu, W. S., Vancouver, B.C.; xClark, W. R., Winnipeg, Man.; xCollins, W. C. G. Collingwood, Ont.; xCornish, C. M., Ingersoll, Ont.; xCraig, G. H., Brighton, Ont.; xDelagran, G. A., Orillia; xFraser, D. C., Toronto; Goffin, D. G., St. Catharines, Ont.; xHardy, M. G. Perth, Ont.; xHawton, M.P., Collingwood, Ont.; Holmes, R. S., Fort Frances, Ont.; xKronick, M. B., Toronto; xLaberge, H. P., Sudbury, Ont.; xLacasse, F. J., Tecumseh, Ont.; xLackie, F. C., Toronto; xLoaring, E. H., Windsor, Ont.; xMcColl, R. G., Toronto; Macdonald, J. B., Toronto; xMcGowan, J. E. C., Toronto; xMcLean, J. D., Regina, Sask.; xMason, W. H. E., Simcoe, Ont.; xMintz, D. B., Regina, Sask.; xMullett J. H., Toronto; xMurphy, M. A., Toronto; xO'Hara, A. W.,

Kingston, Ont.; xPepin, W. J., Windsor, Ont.; xPosen, A. L., Toronto; xReynolds, C., Toronto; xRichardson, L. G., Campbellford, Ont.; xStinson, A. C., Ottawa; xWerry, S. G., Hampton, Ont.; xWoods, C. E., Ottawa; xWoolcott, W. S., Toronto.

x—Enlisted in Canadian Dental Corps.

—*Globe & Mail.*

Dr. Agnew Arrives in China

Dr. R. Gordon Agnew, returning to Chengtu, China, from furlough in Canada, cabled home that he had arrived safely in India.

Royal College of Dental Surgeons of Ontario

The Annual Meeting of the Board of Directors of the Royal College of Dental Surgeons of Ontario will be held beginning Monday, May 25, 1942. For further information, address

DON W. GULLETT, *Secretary*,
211 Huron Street, Toronto.

Dean A.D.A. Mason Honoured

At a recent meeting of the American Association of Dental Teachers at New York City, Dean Mason of the Faculty of Dentistry, Toronto, was elected to the Executive of the Association.

O.D.A. Golf

There will be a golf tournament in connection with the Convention this year as usual. Dr. Jack Trelford is in charge and invites all golfers to bring their clubs.

Remember the date—Thursday, May 21.

Ladies Auxiliary

The Ladies Auxiliary to the Academy of Dentistry and Canadian Dental Corps, M.D. 2, held their monthly meeting in the form of a luncheon at Diana Sweets.

Mrs. S. Stuart Crouch, the President, introduced Dr. Harold Young, the guest speaker, who gave an inspiring talk entitled "Hyacinthes and Biscuits." Mrs. Chas. McLean moved a vote of thanks and made a presentation to Mrs. Young.

In the absence of Mrs. A. J. McDonagh, Mrs. A. E. Webster reported that a box of sweaters had been sent Overseas, and one also to Newfoundland.

Mrs. Geo. Grieve announced that the sewing group are now settled in their new quarters, 4 Albert St. and are working on units for the Red Cross.

Mrs. E. T. Guest reported \$90.00 from scrap gold which has been donated by patients during part of last month.

At a party held at the home of Mrs. J. S. Lapp, the East End group realized \$61.00. The West group under the convenership of Mrs. E. A. Sadleir raised \$139.00 by talent money. The North End group convened by Mrs. E. W. Paul and Mrs. W. B. T. Amy have collected \$143.00 to date. This money is all in support of the war effort.

The annual meeting took the form of a luncheon at the Granite Club. Mrs. S. Stuart Crouch, the retiring president, introduced the guest speaker Dr. L. M. Grose, President of the Academy of Dentistry. He extended greetings and spoke briefly on the further need for a greater war effort.

Mrs. Frank Martin sang two numbers accompanied by Mrs. Vernon Fisk.

Mrs. A. J. McDonagh, wool convener, reported boxes sent, continuously throughout the year containing sweaters, socks, scarves, mitts and tea bags as well as 108 sent overseas at Christmas time.

Mrs. George Grieve, sewing convener, reported the completion of 36 gowns, 22 pairs pyjamas, 7 pairs trousers, 10 coats, 10 blouses, 10 sweaters, 12 pairs slacks, 5 caps.

Mrs. Lapp reported a tea held at the home of Mrs. E. T. Guest, the proceeds of which brought the total for the East Group to \$125.00. Talent money raised by the West Group was \$139.00 and the North Group \$170.50.

Mrs. E. T. Guest, Scrap Gold Convener reported that through the co-operation of the patients of 173 Dentists \$797.71 has been realized in the past six months. This brings a grand total of \$892.91 for this project.

Mrs. R. W. Matchett reported 151 paid up members which is the largest membership to date. Total receipts for the war fund were \$2,612.55 and for the Auxiliary fund \$465.67.

Money will be raised during the summer

months by a mile of pennies. Mrs. John Bothwell presented Mrs. Crouch with a bowl of pink carnations and on behalf of the Auxiliary, expressed their appreciation of her untiring efforts. Mrs. Crouch then presented the Auxiliary with the gift of a gavel.

The new president Mrs. K. R. Harris introduced her executive:—Mrs. E. T. Guest, first vice-president; Mrs. H. W. Hoag, second vice-president; Mrs. R. W. Matchett, recording secretary; Mrs. H. G. Bean, corresponding Secretary; Mrs. F. L. Dayment, treasurer; the councillors are: Mrs. L. M. Grose, Mrs. Harold Skilling, Mrs. L. R. Davison Mrs. J. C. Fullerton, Mrs. R. W. Freestone, Mrs. M. G. Boyes.

Dental Nurses

The Dental Nurses' Alumnae Association held its monthly meeting in the Faculty of Dentistry Building, University of Toronto, on April 14 with President Miss Anna Lindsay presiding.

Arrangements were made for the Graduation Dinner to be given in honor of the graduating class of dental nurses at the Granite Club on June 3.

The members decided that the presentation of the Mobile Dental Unit to the Canadian Dental Corps should be made following the graduation of the dental nurses at convocation at the University of Toronto on June 3.

The dental nurses have planned to tag for the Canadian Red Cross Society again this year on May 23. An appeal was also made for canvassers for the Society.

Miss Gertrude Whitehead was appointed convener of the Nominating Committee with Miss Florence Peart and Miss Madeline Reid on the committee.

OLGA GREENWOOD, *Publicity Convener*.

Ontario Dental Nurses' and Assistants' Association

Your Convention Committees cordially invite you to attend the Eleventh Annual Convention of the Ontario Dental Nurses' and Assistants' Association at the Royal York Hotel Toronto, May 17-21, 1942.

It is our extreme good fortune to hold our Convention in connection with the 75th anniversary meeting of the Ontario Dental Association, and to again enjoy the fullest co-

operation of its executive and members in arranging and carrying out our program.

A wing of the Royal York Hotel has been reserved for dental nurses and assistants attending the Convention. Accommodations are available from \$2.50 to \$4.50 a night. Make your reservation with the Convention Hostess Jean Dalglish, Medical Arts Building, Hamilton.

Your Registration Convener, Doris Gregory, 2333 Bloor Street West, Toronto, asks that, whenever possible, the registration fee be sent to her before the tenth of May. The fee for members is \$3.50, for non-members \$5.50, which includes membership in the O.D.N. & A.A. until December 1942, and \$4.50 for members of the Dental Nurses' Alumnae Association, who are not affiliated with a chapter. Your registration fee entitles you to all convention activities including the reception on Sunday night, the banquet on Monday night and the luncheon on Tuesday noon. The members who do not register until convention will please show their membership cards at the registration desk.

A number of fine clinics will be presented on Monday, and during the following three days, many interesting speakers will give papers and addresses on subjects that are of utmost importance to dental nurses and assistants.

The Convention theme is Service: serve yourself to new ideas; serve your employer better through their application; and serve your association by participating in its Eleventh Annual Meeting.

DOROTHY SCOTT, *Convention Chairman*.

FERNA LEECH COOK, *Publicity Convener*.

BRANTFORD DISTRICT CHAPTER: The March meeting of the Brantford District Chapter was held in the office of Dr. J. R. Edwards.

The officers for the coming year were nominated and elected. Alta Simon was unanimously re-elected as President for a second term, and Olive Keen was re-elected Vice-President, and Ariel Riley was elected Secretary-Treasurer. The President appointed Irene Douglas to serve as Press Secretary and Bulletin Reporter and Mary Healey as War Service Convener.

After the business session Dr. F. J. Wentworth of Brantford spoke to the members.

ARIEL RILEY, *Secretary*.

News from the Provinces

ESSEX AND KENT COUNTY CHAPTER: Winifred Grier presided at the monthly meeting of the Essex and Kent County Chapter held in the Canada Building on April 6.

Under the direction of the Provincial Vice-President and Convention Chairman, Dorothy Scott, final arrangements were made for the convention. Eight dental assistants from this district will take part in a skit that will be presented on Vaudeville Night. Three clinics will be given by our members, and many posters are being prepared for competition.

Nora Kelly reported that a substantial sum had been realized at the tea which was given in her home recently.

WINIFRED GRIER, *Secretary*.

HAMILTON CHAPTER: On April 14, the Hamilton Dental Nurses and Assistants held a dinner meeting at Crosby's Cafeteria. The President, Margaret Thomson, presided over the business session which consisted almost entirely of plans for the convention.

At eight o'clock the members adjourned to the Elliott Dental Laboratory where they enjoyed a most instructive laboratory demonstration.

GERTRUDE KIDNER, *Secretary*.

KITCHENER DISTRICT CHAPTER: Eleven members of the Kitchener District Chapter met in the offices of Doctors Hemmerich and Ross on Wednesday evening, April 1.

The President, Yvonne Jacques of Preston, presided over the meeting, when final plans were made for the convention. The members decided to hold a raffle in the near future. Election of officers followed, the result of which will be reported in an early issue.

RUTH CLARK MEEK, *Secretary*.

LONDON DISTRICT CHAPTER: The President, Dorothy Innes, was in the chair for the April meeting of the London District Chapter held in the office of Dr. H. G. Marshall. The major part of the evening was devoted to business and to convention plans. Kathleen Mofatt of St. Thomas was welcomed as a new member.

Dorothy Nagle invited the members to hold their monthly sewing meeting at her home on Monday evening, April 20.

RUTH WALKER, *Secretary*.

NIAGARA DISTRICT CHAPTER: The Niagara Dental Nurses and Assistants met on April 13, at the home of Grace Thomas, Niagara Falls. The President Mary Thompson was in the chair.

After the business session, which dealt chiefly with convention plans, the Vice-President, Kay Mason, read an interesting paper.

MADLINE COOMBS, *Secretary*.

OTTAWA CHAPTER: The second meeting of the Ottawa Dental Nurses and Assistants was held on March 10, in the offices of Doctors MacLachlan, Beckett and Cameron. Lois McCaughey presided and twelve girls responded to the roll call.

The President read and passed around to the members, many letters, cards, and telegrams of good wishes, from the dental societies in cities and towns throughout Ontario. Enadna Whitman made a motion, which was unanimously carried, that we write to Tomye Turner, President of the O.D.N. & A.A., to thank her for her untiring efforts in forming our Ottawa Chapter.

Following the reading of a letter pertaining to the Provincial Convention by Isabel Jones, the girls discussed plans for the convention.

Leta Harper gave an impromptu talk on "Dental Office Hints." After the talk the girls discussed the hints, and each one was able to carry away at least one new idea to use in the office.

OLIVE CUMMING, *Secretary*.

SARNIA DISTRICT CHAPTER: The Sarnia Dental Nurses and Assistants held their April meeting at the home of the Secretary, Helen Wynne of Forest.

Vera Dyer presided and introduced the guest speaker, Dr. R. G. Woods of Arkona, who gave a very interesting and instructive talk on "Bridge Building in Dentistry." During a social half hour, the members made final convention arrangements.

HELEN WYNNE, *Secretary*.

SUDBURY DISTRICT CHAPTER: Members of the Sudbury District Chapter met in the Capitol Theatre Building on April 6.

After the business session, which was presided over by Ina Leikas, Mr. C. James, Manager of the Porcupine Credit Bureau, gave a talk on "Collections and Accounts."

MARY KENNEDY, *Secretary*.

QUEBEC:

American Association of Dental Schools

The 19th Annual Meeting of the American Association of Dental Schools was held in New York City on March 16-18. Dean A. L. Walsh, of McGill Dental School, gave the opening address and presided at all the executive meetings. There were about 400 delegates present from the four corners of the North American continent. Practically every dental school was represented by its dean and also by many of the heads of various faculties. Many instructive as well as interesting papers were read which were followed by discussion.

The following gentlemen from Montreal attended the Meeting: Dean A. L. Walsh; Dr. G. D. Kilpatrick, Principal of the United Theological College, who gave a most memorable address at the general association dinner; Dr. J. N. Blacklock, Dr. Tiny Thompson, Dr. J. W. Gerrie, Dr. Gerald Racey, Dr. Jack Dohan, Dr. Earl Laurin, Dean E. Dubeau and Dr. E. Charron, of the University of Montreal.

Dental Nurses and Assistants

On February 10 the Montreal Dental Nurses and Assistants Association held its annual meeting and dinner at Chez Ernest. Miss A. Crowell, the President, presided. The following officers were elected for the year 1942-43: President, Miss A. Crowell; 1st Vice-President, Miss B. Lesage; 2nd Vice-President, Miss D. Ross; Treasurer, Miss N. Johnson; Cor.-Secretary, Miss M. Keenan; Rec.-Secretary, Miss D. Arnett; Program, Miss M. Starr; Social, Miss L. Powis.

On March 4 the members were invited to visit Abbott Laboratories and after a very interesting and delightful evening supper was served.

The members formed a knitting club last spring and a great number of articles have been turned over to the Women's Auxiliary of the Canadian Dental Corps and Merchant Navy.

ALBERTA:

Dr. Bulyea Retires

Dr. Harry E. Bulyea, Director of the School of Dentistry, and Professor of Operative Dentistry, University of Alberta, announced on March 12 at the annual dinner of

the Edmonton Dental Association that he was retiring at the end of the present university term.—*Edmonton Bulletin*.

Increased Fees

The Alberta Dental Association has increased the annual licence fee to twenty-five dollars in order to take care of the payments to the Canadian Dental Association and other activities in the interest of the profession.

MANITOBA:

Winnipeg Dental Society

At its April meeting with the president Dr. E. J. Robb presiding the Winnipeg Dental Society wound up its winter activities with an excellent program devoted to a refresher course on "Children's Dentistry for the General Practitioner," and "Practice Management and Oral Diagnosis." The lecturer was Dr. A. T. Thorson of St. Paul Minnesota. The members of the Society who thought it worth while to take the afternoon and evening away from their practices were no doubt amply repaid by Dr. Thorson's able presentation of his subjects and by this time many will have put into practice some of his methods of handling children. There can be no doubt that Dr. Thorson believes that from a standpoint of health, happiness and comfort and its relation to public health and welfare children's dentistry has a more important place than adult dentistry. Is the dental profession measuring up to this responsibility?

Between sessions the Society elected its officers for the 1942-43 season. Drs. W. F. MacKenzie, D. W. McCord and A. A. Myles are the new President, Vice-president and Secretary-Treasurer respectively. Drs. M. A. Deagle and P. B. H. Wood complete the executive.

Dental Nurses and Assistants

The Winnipeg, Dental Nurses' and Assistants' Association met in the St. Regis Hotel on April 6. Miss Jennie Kunynski, Vice-president, was in the chair. Capt. A. M. Pratt, who recently returned from England, was guest speaker. His subject was "Over There." He spoke of the fine morale of the British people and related some of his own experiences which were very interesting.

A business meeting followed. A motion was passed to the effect that, Winnipeg Dental Nurses' and Assistants' Association would join with the other Associations in Canada in forming a Canadian Dental Nurses' and Assistants' Association.

An invitation was received from the Ontario D.N. & A.A. to attend their Eleventh

Annual Convention in May.

Election of officers and the Installation Service will be part of the program next month. Members were asked to bring as a guest a dental assistant who has not yet joined the Association.

A Bowling competition will be held on April 16 at The Academy Bowling Club.

GENERAL NEWS

Annual Meeting of the Ash-Temple Company

At the recent Annual Meeting of The Ash-Temple Company Limited, a change in the Directorate was made. The officers elected were as follows:—

President, H. P. Temple; Western Vice-president, E. E. Rogers; Eastern Vice-president, Howard G. Harris; Secretary, W. M. Temple; Treasurer, Eric Farncombe; Directors, Trevor H. Temple and W. H. Sparrow.

Mr. Rogers has been a director of the Company for the past two or three years and he has now been promoted to be one of the Vice-presidents. Mr. Rogers has been with the Company for quite a number of years and in 1915 when a branch was opened in Regina, he was made manager. He remained there until 1922 when he was appointed as manager of the Vancouver Branch.

Mr. Harris joined the Company about twenty-three years ago and after serving on the inside staff for sometime, he then travelled in eastern Ontario, and on February 6, 1926, was sent to Calgary as manager. He remained there until the end of 1929 when he was promoted and sent as manager to Winnipeg. On September 1 1936, he was moved to Toronto as manager of the Toronto office.

In addition, the Ash-Temple Company Limited owns the stock of The Equipment

Manufacturing Company and at a recent meeting of that Board, the following officers were elected:—

President, Trevor H. Temple; Vice-president, H. P. Temple; Secretary, W. M. Temple; Treasurer, Eric Farncombe; Director, Howard G. Harris.

Brigadier General Fairbank Retires

At the time of the Five State Meeting at Washington, March 9, the retirement from the head of the Dental Corps of the Army of Brigadier General Leigh C. Fairbank was announced by the Surgeon General of the Army. At the same time Surgeon General McIntyre announced the appointment of Brigadier General R. H. Mills to succeed Brigadier General Fairbank.—*Jour. of A. D. A.*

U.S.A. House Passes Mail Order Denture Bill

On March 16, the House of Representatives passed without objection, H.R. 6730, a bill introduced by Congressman Traynor. This bill is designed to prohibit the transportation in interstate commerce of dentures constructed in violation of state dental laws. Following this action the bill was sent to the Senate where it was referred to the Committee on Interstate Commerce.—*A.D.A. Release.*

Conventions

75TH ANNUAL CONVENTION OF THE ONTARIO DENTAL ASSOCIATION,
ROYAL YORK HOTEL, TORONTO, MAY 18-21.

11TH ANNUAL CONVENTION OF THE ONTARIO DENTAL NURSES' AND ASSISTANTS' ASSOCIATION, ROYAL YORK HOTEL, TORONTO, MAY 17-21.

AMERICAN DENTAL ASSOCIATION, BOSTON, MASS., AUGUST 24-28.

18TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL HOTEL, MONTREAL, SEPTEMBER 23-25.

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

Edward Hart of Brantford, Ontario, aged 87, died April 5. He was graduated from the R.C.D.S. of Ontario in 1879 and practised in Brantford for nearly sixty years.

For many years he took an active part in music and contributed much to the musical life of the city of Brantford. For years he was a valued member of Zion United Church Choir and also served on the Board of Management of that church.

He was a Mason and a member of the Brantford Club. At one time he was a member of the Public School Board and always took an active interest in public affairs.

Dr. Hart is survived by his widow, two sons, one of whom is Dr. Wilfred G. Hart, a member of the profession, and three daughters.

•

Benjamin James Curry, of Toronto, Ontario, died April 7. He was graduated from the R.C.D.S. of Ontario in 1900 following which he commenced practice in Winnipeg. In 1922 he developed sleeping sickness from which he never completely recovered but in spite of slight disability continued to attend his patients until 1929, when he was forced to retire from active practice.

Dr. Curry was a member of the Manitoba Dental Association and Dominion Dental Council. He was a Past Master of Northern Light Lodge No. 10, A.F. and A.M., member of the Scottish Rite, Khartum Temple and Nobles of the Mystic Shrine.

He had an extensive library of valuable books and had a fine collection of stamps. He was an amateur gardener and spent considerable time in experimenting with unusual flowers and vegetables.

He moved to Toronto two years ago.

Dr. Curry is survived by his widow, one son who is with the 4th Field Ambulance Corps, Overseas, and two daughters.

•

Frederick Wood of Hamilton, Ontario aged 54, died April 7, from pneumonia. He had lived in Hamilton for the past seven years having come from New York.

He received his B.A. degree from the University of Saskatchewan and was graduated from the Faculty of Dentistry, University of Toronto in 1925. He later took a post-graduate course in New York.

He was a Mason and a member of St. Giles United Church. Wood carving was a hobby and bowling a favourite recreation with him.

Dr. Wood is survived by his widow, a daughter, a brother and two sisters.

•

C. Porter Freeman of Liverpool, Nova Scotia died April 7. He had practised his profession at various places including Sydney and Liverpool, where he had spent more than twenty years.

Dr. Freeman is survived by his widow and two daughters.

•

E. L. Gieser, of Lintlaw, Saskatchewan, aged 72, died March 25. He was graduated from the Philadelphia Dental College in 1899, then moved to Canada and in 1901 commenced practice in Moose Jaw. Later he moved to Lintlaw.

Dr. Gieser is survived by his widow, two daughters, two sons and five grandchildren.

. . . SECTION FRANÇAISE . . .

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Pas un Congrès . . . Mais l'Equivalent

{Lisez plutôt}

Montréal, le 27 avril 1942.

Cher confrère,

Le comité d'Organisation des Journées d'étude des 5 et 6 juin travaille en étroite collaboration pour mettre à point un programme très instructif. Rien ne sera négligé pour donner aux confrères de quoi les instruire davantage.

Votre science doit se renouveler sans cesse pour ne pas se déprécier comme toute chose. Venez profiter de l'occasion offerte par le DEPOT DENTAIRE DE MONTREAL LTEE pour la tenir toujours à date.

Parmi les conférenciers étrangers sur la liste, nous notons tout particulièrement les docteurs Simon Myerson, D.M.D. de Cambridge, Mass., S. G. Standand, D.D.S. de New-York, N.Y., G. I. Heiner de Pittsburg, Pa.

Des cliniques pratiques seront données par Wm. Getz, Chicago, Ill., J. Garbarino de New-York, N.Y., Jos Purcell de Cambridge, Mass. pour ne citer que ceux-là.

Le programme des films sera tout aussi scientifique que pratique.

Il faut continuer le réveil général opéré dans la profession par le dernier congrès. C'est pourquoi le DEPOT DENTAIRE DE MONTREAL LTEE a décidé de vous l'offrir cette année.

Confrère, soyez présent aux JOURNEES D'ETUDE au Château Frontenac à Québec les 5 et 6 juin prochain.

SALUTATIONS CONFRATERNELLES

Le Dépôt Dentaire de Montréal Limitée

Bureau de Direction.

Traitement des Canaux par la Haute Fréquence et par l'Ozone

Par les Drs Michel Dechaume et Mme Davi
L'Odontologie (janv. 1938)

Nous avons accepté avec plaisir l'invitation qui nous était faite d'exposer les résultats que nous obtenons dans le traitement des canaux. Mais, par avance, nous nous excusons de répéter, une fois de plus, les conclusions que nous avons déjà apportées, à d'autres réunions, pour la haute fréquence. C'est qu'elles n'ont pas varié: chaque année qui s'écoule voit se confirmer les guérisons obtenues.

Dans cette communication, nous resterons sur le terrain clinique. Nous avons peu fait d'expérimentation, nous n'avons pu faire des recherches bactériologiques suivies. Le contrôle de nos résultats est clinique et radiographique; il nous paraît suffisamment éloquent, d'autant qu'il repose sur une pratique de six ans.

HAUTE FREQUENCE

Si le traitement des canaux par la haute fréquence suscite encore des controverses passionnées, c'est qu'il existe des divergences importantes de technique. Pour qu'il n'y ait pas de confusion, précisons que les doses utilisées par nous, en monopolaire, sont inférieures à celles qui, dans les conditions expérimentales, donnent une coagulation visible au delà de l'apex. C'est la raison pour laquelle nous disons traitement des canaux par la haute fréquence et non pas par diathermo-coagulation.

Leclercq et Mme Davi, avec un couple de Toury, ont d'ailleurs mesuré le degré d'échauffement que le patient peut supporter sans douleur; ils ont trouvé que cette élévation thermique atteignait 45° à 52°, température à laquelle les substances albuminoïdes ne sont pas coagulées.

De plus, nous faisons tous les traitements sans anesthésie locale et sans rechercher le passage systématique de la sonde au delà du foramen. A notre avis, sans vouloir entrer dans des discussions théoriques, nous obtenons la désinfection du canal et des parois dentinaires:

Par échauffement du liquide avec lequel nous remplissons le canal radiculaire. D'après Heiler, la solution de chloramine a un pouvoir antiseptique vingt fois plus grand à 50° qu'à 20°. — Par élévation thermique légère de la masse de dentine radiculaire, ce qui accroît la pénétration médicamenteuse. — Par son action bactéricide propre.

Enfin l'élévation thermique provoque une vaso-dilatation périradiculaire qui augmente la défense organique.

Ces notions rappelées, nous allons indiquer le matériel que nous utilisons, les différents cas dans lesquels nous effectuons ce traitement, la technique et les résultats.

Le matériel est simple: Un petit poste de diathermie — nos préférences vont à ceux qui peuvent se fixer sur l'équipement — pour qu'ils soient toujours en ordre de marche.

Un milliampèremètre porte-électrode de Dechaume avec sonde de Donalson.

Une seringue en verre de 2 cc. avec aiguille fine en platine ou nickel, assez malléable, pour pouvoir pénétrer dans le canal.

Une solution de tochlorine préparée extemporanément avec de l'eau à la température de la pièce.

INDICATIONS

Nous traitons actuellement par la haute fréquence non seulement les infections périapicales (granulomes aigus ou chroniques, suppurés ou non, avec ou sans réactions

cellulaires), mais aussi toutes les affections de la pulpe (pulpites aiguës ou chroniques, gangrènes pulpaire, mortifications pulpaire).

Les pulpites, en effet, sont des lésions inflammatoires; il ne suffit pas de mortifier la pulpe, il faut désinfecter soigneusement le canal et les parois dentinaires pour éviter les complications péri-apicales ultérieures.

Il nous semble que, depuis que nous traitons ainsi et systématiquement toutes les pulpites, nous n'observons plus de granulomes. Bien plus, toutes les fois que nous dévitalisons une dent saine, nous faisons une séance de haute fréquence pour désinfecter le canal et ses parois, car nous ne pouvons pas avoir la prétention de donner des soins rigoureusement aseptiques.

TECHNIQUE

Nous la rappellerons très sommairement, car nous l'avons maintes fois exposée, depuis 1931:

(1) *Pulpite hypérémique ou dévitalisation d'une dent saine.* Première séance: pansement arsénical. Deuxième séance; 24 ou 48 heures après, dévitalisation ou deuxième pansement, si la douleur est trop vive. Elargissement des canaux avec les crochets de Kerr. Application de haute fréquence.

Cette application se fait de la façon suivante, pour une monoradiculaire: Isoler la dent de la salive; remplir le canal, après assèchement, avec la solution de tochlorine à l'aide de la seringue; enfoncer la sonde de Donalson le plus loin possible sans dépasser l'apex; lancer le courant avec une intensité de 30 à 40 mmA (lue au milliampèremètre porte-électrode), pendant dix secondes environ. S'arrêter avant si le patient accuse une douleur. Le milliampèremètre est nécessaire pour contrôler le passage du courant à l'intensité voulue; la perception de la sensation de chaleur par le patient indique la dose à ne pas dépasser; laver avec une pulvérisation d'eau froide, sécher et recommencer cette manœuvre six fois; terminer l'obturation du canal avec une pâte antiseptique ou neutre, non poreuse (1). Nous croyons, avec Lentulo que l'obturation complète du canal est indispensable pour éviter les récidives. Nous ne pensons pas qu'elle suffise à elle seule, car nous avons vu, à plusieurs reprises, des dents à canaux obturés avec un granulome. On peut aussi compléter l'obturation avec un cône d'argente.

Dans les cas de multiradiculaire, on répète les mêmes manœuvres pour chaque canal, on assèche et remplit les canaux en même temps, puis on fait passer successivement le courant dans les divers canaux.

(2) *Gangrène pulpaire.* — S'il y a tout d'abord la moindre persistance d'un filet nerveux, il faut le mortifier.

Après quoi, il est nécessaire de faire deux séances de haute fréquence, à un ou deux jours d'intervalle, avec la technique indiquée plus haut. Après chaque séance, on laisse une mèche imbibée de tochlorine sous un pansement occlusif. (Ne pas s'inquiéter de l'odeur et de la légère coloration jaune quand on retire la mèche).

(3) *Lésions périapicales* (aiguës ou chroniques, suppurées ou non, avec ou sans phlegmon) (2).

Le traitement comporte ici trois séances à un ou deux jours d'intervalle. Il y a tout intérêt à ne pas les espacer davantage. Chacune des séances se fait comme il a été indiqué au traitement des pulpites.

Après chaque séance, on laisse dans le canal sous un pansement occlusif, une mèche imbibée de la solution de tochlorine. La troisième séance comporte l'obturation du canal et l'obturation définitive superficielle.

(1) Pâte Robin modifiée:

Trioxyméthylène	2 gr.
Minium	4 gr.
Oxyde de zinc	60 gr.

(2) Dans les cas de phlegmon, il faut bien entendu drainer l'abcès.

CAS PARTICULIERS

(a) *Dents couronnées.* — Il est préférable mais non indispensable d'enlever la couronne. Il suffit alors de faire un orifice de trépanation assez large pour que la sonde de Donalson ne touche pas le métal. De même si la dent porte une volumineuse obturation métallique triturante.

(b) *Canal à apex largement ouvert.* — Au cours des séances, il faut bien veiller à ne pas trop enfoncer la sonde, si non le malade perçoit une douleur immédiate lors du passage du courant. Il suffit de retirer la sonde d'un millimètre pour que disparaisse la douleur. Au moment de l'obturation des canaux la pâte est refoulée au delà de l'apex, cet incident entraîne, dans les jours qui suivent, des douleurs extrêmement vives avec arthrite, qui peuvent persister quelques jours. Si l'os a été érodé par le granulome, la pâte peut arriver sous la gencive, avec une pointe de feu ou lui donne issue, ce qui amène une sédation rapide. Dans le cas contraire, la douleur est plus tenace.

(c) *Canal semi-imperméable.* — Procéder comme si le canal était perméable sur toute sa longueur.

(d) *Dents de lait.* — La technique est applicable avec de bons résultats.

(e) *Granulomes kystiques.* — Il est bien évident que pour les kystes volumineux qui se traduisent à la radiographie par une image à contour nettement circonscrit, d'un diamètre supérieur à un centimètre, seul le traitement chirurgical est de mise. Encore faut-il remarquer que la haute fréquence peut servir à stériliser la dent causale si elle vaut mécaniquement la peine d'être conservée.

Dans les cas appelés granulomes diffus où la radiographie montre une zone de décalcification à contours estompés, alors même que cette plage est très étendue, d'un diamètre supérieur à un centimètre, il est indiqué de faire le traitement par la haute fréquence, tout au plus en faisant au patient la réserve que s'il est insuffisant on complètera par un curetage périapical.

Reste la question des granulomes qui, radiographiquement, se traduisent par une image arrondie à contours nets de 5 à 10 millimètres de diamètre ou, cliniquement, par une saillie caractéristique. C'est dans ces cas qu'il ne faut entreprendre le traitement qu'avec réserves formelles, en prévenant le patient de la nécessité probable d'un curetage périapical après désinfection de la dent.

INCIDENTS

Dérivation du courant. — Le courant peut être dérivé vers la gencive par une obturation métallique ou, dans le cas de carie disto ou mésio ou cervico triturante, par le liquide. Le patient accuse une douleur à la gencive (qu'il dissocie parfaitement de la sensation de chaleur à l'apex). Pour l'éviter, il faut essuyer avec un coton l'excès de liquide dans la cavité pulpaire.

Racine grêle. — La sensation de chaleur est très rapidement perçue; il faut faire des applications plus courtes et plus nombreuses.

Persistance d'un filet nerveux radiculaire. — Le patient perçoit une douleur vive dès le lancement du courant. Parfois, après quelques secondes, la douleur s'atténue. Sinon, il faudra mortifier le filet avec un pansement.

Il faut différencier ces cas de ceux où — du fait de l'infection — la pénétration de la sonde est douloureuse; il suffit de faire passer le courant pour que cesse la douleur.

Réaction phlegmasique. — Dans le cas de lésion périapicale, on peut voir, le lendemain de la première séance, survenir une poussée inflammatoire aiguë. Il suffit de faire aussitôt la deuxième application pour que tout rentre dans l'ordre.

Réveil ou recrudescence de l'inflammation sur une dent voisine mortifiée. — Il faut la prévoir et traiter les deux dents simultanément.

RESULTATS

Les résultats immédiats sont surprenants.

Les phénomènes douloureux disparaissent en quelques heures, tout au plus en quelques jours. La fluxion se résorbe non moins rapidement.

A de nombreuses reprises, des confrères nous ont confié des malades en traitement depuis des mois et qui ne supportaient pas le moindre pansement scellé; nous avons toujours pu placer un pansement occlusif à la première séance et obturer les canaux à la troisième séance (en 3 à 6 jours).

Les résultats éloignés ne sont pas moins étonnants.

Pour quelques-uns de nos malades dont les lésions radiographiques étaient importantes, nous avons des contrôles dont certains datent de quatre à cinq ans. Nous avons pu suivre la réparation progressive et la voir aboutir à une véritable "*restitutio ad integrum*". Quelques-unes de nos radiographies sont si nettes qu'on peut parler de guérison complète puisque le ligament présente, à l'apex, les mêmes contours que sur une dent normale.

Nous n'avons, à vrai dire, pas eu à enregistrer d'échecs puisque nos insuccès ont été observés:

Pour des kystes méconnus à l'examen clinique et radiographique et vérifiés à l'intervention.

Pour quelques malades pusillanimes qui n'ont pas voulu accepter le nombre de séances et ont exigé l'extraction. Un ou deux autres qui avaient eu un refoulement de pâte au delà de l'apex, ont eu leurs dents extraites par des confrères qui ne connaissaient pas la nature exacte de cette réaction.

Pour deux ou trois cas où la mortification était en rapport avec un cul-de-sac pyorrhéique non réséqué.

COMPARAISON AVEC LES AUTRES METHODES

Sans prétendre que cette méthode soit la seule qui permette d'escompter de tels succès, nous croyons pouvoir affirmer — forts d'une longue expérience — qu'il y en a peu qui soient susceptibles de donner des résultats aussi rapides et aussi constants.

Les méthodes médicamenteuses sont plus longues et plus incertaines.

L'ionophorèse est plus délicate et connaît des contre-indications dans les cas aigus, son application est douloureuse.

La méthode mécanique de l'obturation immédiate préconisée par Lentulo, ne paraît pas absolue.

La méthode de Coën a l'inconvénient de demander la mise en communication large de la cavité pulpaire avec le périapex. Elle n'est pas plus rapide.

L'utilisation de l'ozone nous laisse espérer, parmi d'autres avantages, une rapidité plus grande. D'autre part, il n'est pas irritant comme le chlore. Certains confrères ont en effet prétendu que la recalcification des lésions périapicales était plus lente dans les traitements par la haute fréquence. C'est là un fait difficile à contrôler.

Nous avons essayé deux sortes de traitement: le traitement par l'ozone à l'état de gaz et le traitement par la haute fréquence avec une solution, non pas de tochlorine, mais d'ozonide terpénique. Cette dernière chauffée met en liberté de l'ozone à l'état naissant.

OZONE

Depuis un an, nous employons l'ozone dans le traitement des canaux, incités par les heureux résultats obtenus par Fish. Ce n'est pas que la haute fréquence nous aie donné des déboires, mais nous devons toujours tendre à améliorer nos méthodes.

Or, l'ozone par ses propriétés physiques nous paraît un agent thérapeutique excellent. Il est particulièrement indiqué contre les anaérobies. Il n'est pas irritant pour les tissus. Il est même eutrophique.

Comme il ne nous a pas été possible de nous procurer l'appareillage de Fish, nous

avons réalisé une instrumentation simple: un générateur d'ozone à partir de l'oxygène; une aiguille mousse, malléable (nickel) d'un diamètre très fin.

La technique est simple. La dent est préparée comme pour un traitement par la haute fréquence. L'aiguille reliée par un tube au générateur d'ozone est enfoncée dans le canal; pendant le passage du gaz on imprime à l'aiguille des mouvements de va-et-vient pour que le gaz puisse s'échapper. Mais il ne faut pas craindre de développer dans le fond du canal une forte pression gazeuse; il y a même intérêt à ce que l'ozone pénètre et imprègne les tissus. On fait ainsi passer le courant gazeux pendant une minute environ. Si l'on craint une irritation des voies respiratoires par le gaz, on peut placer sur la dent un tampon imbibé d'une solution à saturation d'hyposulfite de soude et faire passer l'aiguille dans le tampon.

Si la lésion périapicale est fistulisée et le canal perméable, on peut voir les bulles de gaz sortir par l'orifice fistuleux.

Après le passage de l'ozone, on assèche le canal et on obture celui-ci immédiatement. Un contrôle radiographique immédiat est nécessaire pour s'assurer de la bonne obturation du canal; sinon il faut la refaire.

Indications. — Nous avons traité avec cette méthode les mêmes cas qu'avec la haute fréquence. Il n'y a aucune contre-indication en dehors des canaux imperméables. Lorsque la lésion périapicale se complique d'un abcès périmaxillaire, celui-ci doit être incisé et traité par l'ozone.

Incidents. — Nous n'avons observé aucun incident en dehors des cas où la pâte a débordé l'apex comme avec la haute fréquence.

Les résultats immédiats sont excellents. S'il y a des phénomènes inflammatoires, ils rétrocedent rapidement. Nous avons, à l'heure actuelle, traité 76 malades, sans incident.

Il est encore trop tôt pour juger définitivement des résultats éloignés. Vous verrez cependant les radiographies très suggestives d'un malade traité il y a quinze mois, avec deux séances.

HAUTE FREQUENCE ET OZONE

En présence de ces heureux résultats, nous nous sommes demandés s'il ne serait pas possible de combiner les deux méthodes. Et c'est ainsi que nous avons été conduits à utiliser la haute fréquence avec une solution d'ozonide terpénique. L'échauffement de la solution placée dans le canal radiculaire met en liberté de l'oxygène à l'état naissant. Cet ozone est plus antiseptique et moins irritant que le chlore.

Nous avons ainsi, depuis deux mois, traité 45 patients. Ces premiers essais sont encourageants; nous les continuons.

CONCLUSION

Il faut tirer une conclusion de cette étude. Pour assurer la désinfection des canaux, il semble actuellement un peu insuffisant de se contenter de placer un médicament dans le canal et d'attendre qu'il veuille bien imprégner la dentine. Quelle que soit l'efficacité du produit, cette imprégnation est lente et se fait en surface.

Parmi les méthodes qui se proposent de favoriser la pénétration médicamenteuse, la haute fréquence nous paraît la plus efficace. Elle offre l'avantage de n'être pas limitée à l'emploi de tel ou tel antiseptique. Par ailleurs, l'échauffement produit une vaso-dilatation favorable à la défense organique; aussi elle constitue un progrès considérable dans la thérapeutique conservatrice.

Avec l'ozone, nous disposons d'un gaz doué de propriétés bactéricides et eutrophiques, qui pénètre profondément les tissus. Haute fréquence et ozonothérapie doivent donc retenir notre attention pour la simplicité de leur technique, l'efficacité de leurs résultats.

Sur quoi se base-t-on pour présenter cette prétendue action biologique de certaines obturations? Sur des hypothèses, sans doute, mais aussi sur l'expérience; et l'on fait état de contrôles radiologiques et même histologiques. Malheureusement, il n'existe

pas d'échelle de comparaison en dehors de celle du temps pour apprécier ces actions biologiques. La "restitutio ad integrum", constatée après un an ou deux, est presque toujours invoquée comme test d'efficacité, or elle ne prouve rien; certes, elle établit de façon formelle la preuve de la guérison, elle prouve que la guérison a été obtenue en présence de la substance obturatrice, "malgré" cette substance si l'on veut, mais pas du tout "grâce" à cette substance. Ce qu'il faut pour apprécier le rôle biologique d'une substance obturatrice, c'est rechercher le temps minimum nécessaire pour constater la guérison. Cette recherche ne peut être effectuée que par des contrôles radiologiques périodiques rapprochés, car ce sont les seuls contrôles qui permettent des répétitions et des comparaisons dans le temps.

Le temps maximum, nécessaire pour observer une recalcification périapicale, doit être envisagé sur deux bases différentes: 1° Dans le cas de décalcification simple, par inflammation du voisinage, sans destruction osseuse, une dizaine de jours suffisent pour constater radiologiquement la recalcification spontanée, après disparition de l'inflammation; 2° Dans le cas de destruction osseuse, il faut normalement de 90 à 120 jours pour avoir une reconstitution osseuse et calcification de cet os néoformé.

Ces temps minima sont ceux observés sans intervention de substances à prétention biologique; or, jamais ils n'ont été réduits par l'action d'un médicament quelconque et, tout au contraire, la réparation tissulaire est souvent retardée par l'emploi de certaines substances. Si donc, un jour, on constate une régénération dans ces délais normaux, il ne faut pas s'en émerveiller et parler de thérapeutique transcendante, mais être simplement satisfait de n'avoir apporté aucune entrave à cette régénération.

De façon habituelle, la reconstitution périapicale est bien plus longue et la cause doit en être recherchée, ici encore, dans un autre esprit de système, d'après lequel on tend à utiliser le même produit pour la désinfection radiculaire passagère et l'antisepsie obturatrice, alors qu'une discrimination est absolument nécessaire.

Une désinfection radiculaire agissant sur des tissus morts, — débris organiques putréfiés —, n'est à aucun moment nocive; mais cette désinfection se propageant aux tissus sains du périapex, peut être simultanée d'une action caustique qui doit être évitée. A la rigueur, cette causticité peut être tolérée, en raison de la durée éphémère que doit comporter le temps de désinfection. — "Dame Nature" est bonne personne et se charge de la réparation de l'outrage passager imposé au périapex. — Mais, lorsqu'il s'agit d'établir une antisepsie permanente, il faut tout de même penser au voisinage vivant (et je fais ici allusion plus particulièrement au formol, merveilleux agent de désinfection, même radiculaire, mais dont on a minimisé les bienfaits par un emploi systématique en l'incorporant à la substance obturatrice; pour s'en rendre compte, il n'y a qu'à noter le long retard apporté à la recalcification périapicale, lors des obturations formoliques: il faut un, deux ou trois ans, alors que de trois à six mois sont seulement nécessaires si, tout en ayant désinfecté au formol, on a obturé avec autre chose que du formol ou ses dérivés.)

Système, toujours système! Dissociations donc la désinfection radiculaire passagère de l'antisepsie obturatrice permanente, cette dernière visant surtout à n'être pas nocive.

* * *

Et voici, qu'ayant annoncé une synthèse du traitement radiculaire, j'ai surtout fait une analyse critique; mais, en définitive, c'est pour en expurger ce qui est inutile et parfois nuisible, et ramener la thérapeutique aux trois seuls éléments distincts qui la synthétisent, en attribuant à chaque élément sa valeur intrinsèque réelle et sa caractéristique propre:

La pénétration radiculaire est indispensable et nécessite des procédés mécaniques chimiques et en dernier ressort ionophorétiques.

La désinfection, qui est passagère, peut être de nature quelconque.

L'obturation, qui est nécessairement subtotale, doit trouver une compensation à son imperfection dans une antisepsie permanente qui ne doit plus être quelconque, mais "biophile".

Synthèse du Traitement Des Canaux Dentaires Infectés

Par le Dr Pierre-D. Bernard

Médecin Capitaine

L'Odontologie (janv. 1938)

Suivant un vieil adage: "Le Philosophe doit médiciner et le Médecin doit philosopher", je vais obéir aujourd'hui à la seconde prescription au sujet des traitements radiculaires pour en tirer un enseignement pratique.

Il est une déformation de la pensée humaine qui, par un abus de concentration de l'attention, hypertrophie l'importance d'un fait au point de nous éblouir et, comme dans un clair obscur, de voiler tout ce qui environne ce fait.

Dans la pratique, une telle faculté de particularisation fournit à l'homme un esprit de systématisation exclusive et parfois excessive.

L'Odonto-stomatologie a singulièrement souffert de cette tendance au *système*, dans un but louable de simplicité, mais souvent par un effet déplorable de l'insuffisance de documentation.

Un jour, tel éminent chercheur a noté le rôle, parfois considérable, des infections dentaires à l'égard de la santé générale; il a réuni tout ce qu'il pouvait trouver pour étayer cette thèse de la "Focal Infection" et, obnubilé par le faisceau d'observations, de faits cliniques, il a oublié qu'il y avait peut-être un remède et, "Haro sur le baudet, cause de tous nos maux", il a conclu à l'extraction systématique, à l'extraction à outrance.

Sur un autre plan, celui de la thérapeutique conservatrice, nous avons assisté, particulièrement ces dernières années, à une véritable prolifération de procédés chargés d'épithètes — souvent impropres, mais empruntées au langage scientifique —. Or, à l'analyse, on peut toujours constater que ces procédés relèvent de techniques habituelles banales, c'est-à-dire qu'ils comportent toujours les temps de: *pénétration* radiculaire, *désinfection* chimique et *obturation*; temps qui à eux seuls sont capables d'apporter la guérison. Mais entre temps on a pratiqué un petit geste — inutile en fait, mais considéré comme nécessaire — ; et de ce geste, symbole de la méthode, on fait grand étalage, d'un détail hypertrophié on voile l'ensemble et d'un seul principe on veut faire un "*système*".

J'ai le souvenir, par exemple, d'une technique qui, outre les manœuvres habituelles, comportait un assèchement complet des canaux avant l'obturation. Il n'y a jusque-là rien que de très louable; mais cet assèchement était présenté comme indispensable, sous prétexte que... la fermentation alcoolique s'arrête à 15° d'alcool! ce qui, par une extraordinaire interprétation, serait dû à l'insuffisance d'eau pour permettre la vie du ferment (alors qu'il en reste 85% dans la solution). L'auteur de cette formule faisait étalage de guérisons radiologiques qu'il attribuait à l'observation de ce principe. Certes, l'assèchement des canaux peut être utile, il faut le recommander, mais il ne faut pas, avec autant de fantaisie, ériger ce petit détail en un système exclusif.

Nous pouvons placer sur le même plan presque toutes les techniques qui utilisent l'électricité en supplément du programme habituel; et, à cet égard, un véritable essai d'arguments nous bourdonnent aux oreilles: Les uns attribuaient au courant, — je parle au passé — un rôle d'électrocuteur de microbes! Les autres faisaient appel à l'effluviation génératrice d'ozone ou de rayons U. V. bactéricides, à l'étincelage apte à foudroyer ou bombarder les microbes! Expressions colorées, mais qui frappaient beaucoup plus l'imagination que l'électricité ne frappait les microbes. D'autres, enfin, on fait appel à la coagulation des tissus périapicaux sans se rendre compte que cette coagulation, effective pour les tissus vivants entre 60 et 70°, n'était absolument pas

nocive pour les bactéries qui, bien au contraire, trouvent dans les tissus ainsi coagulés de parfaits milieux de culture. Ceci n'a d'ailleurs plus beaucoup d'importance car on se garde bien, aujourd'hui, d'appliquer les fortes doses de diathermie qui seraient nécessaires pour la coagulation et, après quelques années d'expériences à faibles doses, on a reconnu la fausse route et l'inexactitude du terme; mais avec désinvolture on ajoutait: "Nous avons cependant conservé cette appellation". Mais pourquoi donc cette persévérance dans l'erreur reconnue?... Je dois d'ailleurs, à cet égard, féliciter Dechaume, auteur de cette formule de ténacité, d'avoir abandonné maintenant non seulement le principe mais aussi l'appellation après avoir voulu la maintenir; et cela est tout à son honneur.

Bien d'autres arguments ont été présentés pour justifier soit l'électrolyse, soit l'ionisation, soit l'emploi de la haute fréquence.

Pour cette dernière, on a prétendu, avec un déluge d'explications mais sans aucune expérimentation, qu'elle "transportait" des médicaments par "Electrosmose"... Puis, devant l'évidence, on n'en a plus parlé.

On a fait état également d'anciennes expériences de d'Arsonval, qui était arrivé à atténuer la virulence de microbes (et dans certains cas à les détruire) par des applications massives de diathermine pendant 30 ou 45 minutes. Et, par une singulière transposition, on a prétendu qu'avec des intensités beaucoup plus faibles, pendant une durée de quelques secondes seulement, et sur des microbes beaucoup plus résistants, la haute fréquence avait une action bactéricide propre dans les tissus dentaires! Peut-on, honnêtement, comparer: 50 ampères pendant 45 minutes, avec 60 milli pendant 10 secondes? Au total l'application thérapeutique comporte seulement de 5 à 10 milliampères-minutes en haute fréquence et il en faut 12.000.000 pour atténuer la virulence des cultures bactériennes. Dans ce rapprochement il y a un sophisme vraiment trop flagrant et il faut cesser de parler de l'action bactéricide de la haute fréquence dans les tissus dentaires.

A bout d'arguments, — car il y en a bien d'autres, tous aussi artificiels — il a fallu, pour sauver les apparences et en justifier l'emploi, faire jouer à la haute fréquence un rôle accessoire et toujours l'associer à la triade banale: *pénétration, désinfection, obturation*, triade qui sera en définitive la formule synthétique de toutes les thérapeutiques. Et comme après la frénésie du début, la haute fréquence est maintenant employée à des doses inoffensives, on ne peut vraiment plus en critiquer l'emploi.

Toutefois, il faut répondre à ceux qui, victimes d'une illusion, mais dans une bonne intention, ne manquent jamais de faire état de guérisons réelles contre les arguments rationnels; cette réponse la voici: "certes, il y a un rapport manifeste de succession entre chaque élément des diverses techniques et les résultats, qui sont parfois très beaux et dont on doit féliciter les auteurs; mais on ne peut donner à ce rapport le sens de relation de cause à effet; la diathermie n'est pour rien dans les résultats car elle ne représente qu'un tout petit détail dans l'ensemble des techniques qui, elles, sont parfaites; elle n'y est pour rien car on ne peut lui reconnaître aucun rôle et parce que l'on fait tout aussi bien sans elle."

Parmi toutes les autres techniques, quelles sont celles qui ne se ramènent pas à la triade synthétique: "pénétrer, désinfecter, obturer"?

Je n'en connais qu'une: celle qui, flattant le goût de simplicité, n'envisage que l'antisepsie et se contente de... tout enfermer sous un mol oreiller de coton formolique! Procédé sans prétention d'ailleurs puisque son auteur dit exactement ceci en parlant de granulome ainsi traité: "Chair à saucisse putréfiée..." et qui ne change pas d'aspect radiologique ou fort peu.

A cette exception près — et malgré les particularités que l'on érige en système — toutes les autres méthodes ne sont qu'une application de la triade thérapeutique.

Certes, l'un des éléments de cette triade peut prédominer: telle méthode vise à "mieux pénétrer" et préconise tel ou tel procédé mécanique, chimique ou électrique. Une autre vise à "mieux obturer", et je crois qu'à cet égard, le procédé de Lentulo réunit l'unanimité des suffrages. Quant à toutes les autres méthodes, elles visent à "mieux désinfecter".

C'est cet élément de la désinfection que je voudrais tout d'abord analyser:

A côté du formol, fourmille une pléiade d'antiseptiques, auxquels on attribue de nombreux succès: On a ainsi préconisé des acides, des bases, des sels, de l'iode, du chlore sous plusieurs formes, associé ou non à la diathermie, des colloïdes, des gaz (ozone), des métaux oligodynamiques... et chacun dogmatise: (et je cite textuellement l'un d'eux): "Nous pouvons affirmer qu'il n'y a aucune méthode susceptible de donner des résultats aussi rapides et un égal pourcentage de succès."

Mais, dans cette fanfaronnade, — et je m'excuse de faire encore figure d'accusateur public — il y a une erreur d'interprétation et à plusieurs titres:

D'abord, on ignore la méthode du voisin qui n'est pas toujours aussi mauvaise qu'on le prétend.

Ensuite, dans cette sentence, il y a dissimulation, consciente ou non, et erreur au titre statistique dans l'expression du pourcentage des succès: toutes les fois qu'un détail de technique est inapplicable (par exemple lorsque l'accès radiculaire est difficile), on ne fait pas le "merveilleux" traitement, la dent est extraite, l'échec est dissimulé sous le titre de contre-indication, et n'entre pas dans le pourcentage de la statistique. — (Et cela me rappelle cette pouponnière prodigieuse où l'on enregistrerait un pourcentage nul de décès infantiles... Evidemment, dès qu'un enfant était gravement malade on l'envoyait mourir à l'hôpital). — Donc le pourcentage des succès, dont on fait tant de cas, en thérapeutique dentaire, ne peut être estimé à sa juste valeur que par le décompte des dents extraites sans tentative de traitement et qu'il ne faut pas éclipser.

Enfin, il y a une autre erreur d'interprétation dans cette formule présomptueuse sur les résultats obtenus par tel ou tel antiseptique dentaire: Erreur, parce qu'on attribue ici encore à un Détail ce qui appartient au Tout, à l'antiseptique (comme tout à l'heure à la haute fréquence) ce qui peut fort bien n'appartenir qu'à l'obturation: Lentulo ne nous a-t-il pas montré que, sans désinfection transcendante, la seule obturation peut suffire à la guérison péri-apicale?

Nous pourrions ainsi examiner toutes les techniques thérapeutiques actuellement préconisées, et dans toutes, nous retrouverions cette hypertrophie d'un détail, plus ou moins opérant; mais, restant sur le plan général, je voudrais seulement montrer maintenant l'importance inconsiderée donnée habituellement au pouvoir des antiseptiques.

Comment peut-on affirmer que tel procédé de désinfection est meilleur sous prétexte que le pouvoir de l'antiseptique employé est plus puissant? La puissance d'un antiseptique s'évalue par le degré de sa dilution, qui lui conserve son pouvoir antimicrobien; mais, en thérapeutique dentaire, les antiseptiques sont toujours utilisés en solutions relativement concentrées; or, je ne connais aucun microbe qui puisse résister au contact du chlore, de l'iode, du formol, de l'eau oxygénée, de l'ozone... et je ne comprends pas à quel principe on obéit, en voulant augmenter le pouvoir bactéricide de l'un d'eux, ou en préférant celui qui passe pour être le plus fortement antiseptique.

Non, le problème n'est pas dans la recherche du plus puissant antiseptique. Le plus banal est suffisant, le tout est de l'amener au contact même du microbe; peu importe le procédé d'exécution de l'ennemi, l'essentiel est de l'atteindre.

En somme, dans la triade thérapeutique, la désinfection est un temps secondaire dont l'importance réelle a été déformée et c'est le problème de la pénétration qui

doit être résolu avant toute chose. C'est cet élément de la triade thérapeutique que je voudrais maintenant analyser:

Facile en bien des cas, la solution de ce problème peut présenter parfois de sérieuses difficultés:

Lorsqu'il s'agit d'atteindre un canal principal, l'adresse seule entre en jeu; de nombreux obstacles sont vaincus par des manœuvres mécaniques ou chimiques, et on ne saurait préconiser l'une ou l'autre sans tendre, ici encore, vers un excès de l'esprit de système. Tous les procédés sont excellents, et seul importe le "savoir-faire".

Mais, lorsqu'il s'agit de canaux accessoires ramifiés, apicaux ou latéraux, aucun procédé mécanique ou chimique ne peut les atteindre sauf par imbibition lente et incertaine. Il y a donc "incertitude" et il ne semble pas que l'on se soit attaché à ce problème de façon suffisante; et pourtant, n'est-ce pas là qu'il faut rechercher les causes d'échecs thérapeutiques, plutôt que dans une prétendue inefficacité médicamenteuse?

Je n'ai pas caché, à cet égard, la confiance que je faisais au procédé d'Oppenheim-Coën, qui, par le fait du couple électrique de ses tiges bi-métalliques, doit permettre, par le mécanisme que j'ai décrit (1), la stérilisation des canaux secondaires ramifiés; mais, il reste alors le déchet important des canaux principaux insondables, dans lesquels on ne peut même pas placer, à la profondeur nécessaire, ces tiges de Coën.

Je crois cependant avoir suffisamment démontré que, par l'ionophorèse, le problème des canaux inaccessibles était résolu. Je m'excuse ici de revenir sur ce sujet; mais c'est simplement pour le situer à sa place. J'ai renouvelé cette démonstration en utilisant précisément ce phénomène physique pour l'étude des canaux accessoires et pour montrer qu'ils étaient bien plus nombreux qu'on ne le croyait jusqu'à ce jour (2).

En thérapeutique, ce phénomène d'ionophorèse permet d'introduire des antiseptiques particuliers dans tous les recessus des foyers microbiens dentaires et périapicaux, — et jamais la moindre contestation n'a été soulevée à cet égard; au contraire, je n'ai eu que des confirmations de la part de tous les expérimentateurs étrangers. — Cette solution résoudrait d'ailleurs le problème de la pénétration dans tous les cas. Toutefois, je voudrais que l'emploi de ce procédé soit réservé aux seuls cas rebelles aux autres thérapeutiques, par le fait de l'impénétrabilité radiculaire; et, si je précise cette "réserve", c'est surtout pour ne pas faire preuve de cet esprit de système que je condamne.

Le problème essentiel de la pénétration, et en conséquence celui de la désinfection, sont donc résolus de nos jours de façon certaine; mais dans tous les cas, il reste celui de l'obturation radiculaire.

Problème suffisant — semble-t-il pour certains — suffisance apparente en réalité, car l'obturation implique déjà la pénétrabilité, et elle est toujours précédée de désinfection chimique — ne serait-ce que par un modeste lavage antiseptique —; d'ailleurs, même lorsque la désinfection médicamenteuse est considérée comme inutile, elle n'est cependant pas négligée, puisque les substances obturatrices alors utilisées sont antiseptiques.

Mais, ici encore, une analyse s'impose. A quoi répond cette nécessité d'obturation avec antisepsie même discrète? A une crainte d'asepsie imparfaite, dit-on, et cela est très sage; mais n'y a-t-il pas également la crainte d'obturation imparfaite, et pour le moins, la vacuité des canaux secondaires ou accessoires impénétrables?

Dès lors, une obturation quelconque n'apparaît plus du tout comme une condition

(1) *L'Odontologie* du 30 juin 1937. (Le phénomène général d'ionisation).

(2) Contribution de l'ionophorèse à l'étude anatomique des canaux dentaires. (Congrès de l'A. F. A. S., 1937).

suffisante, puisqu'il faut la compléter par une antiseptie; bien plus, elle apparaît comme une condition non nécessaire dans sa totalité.

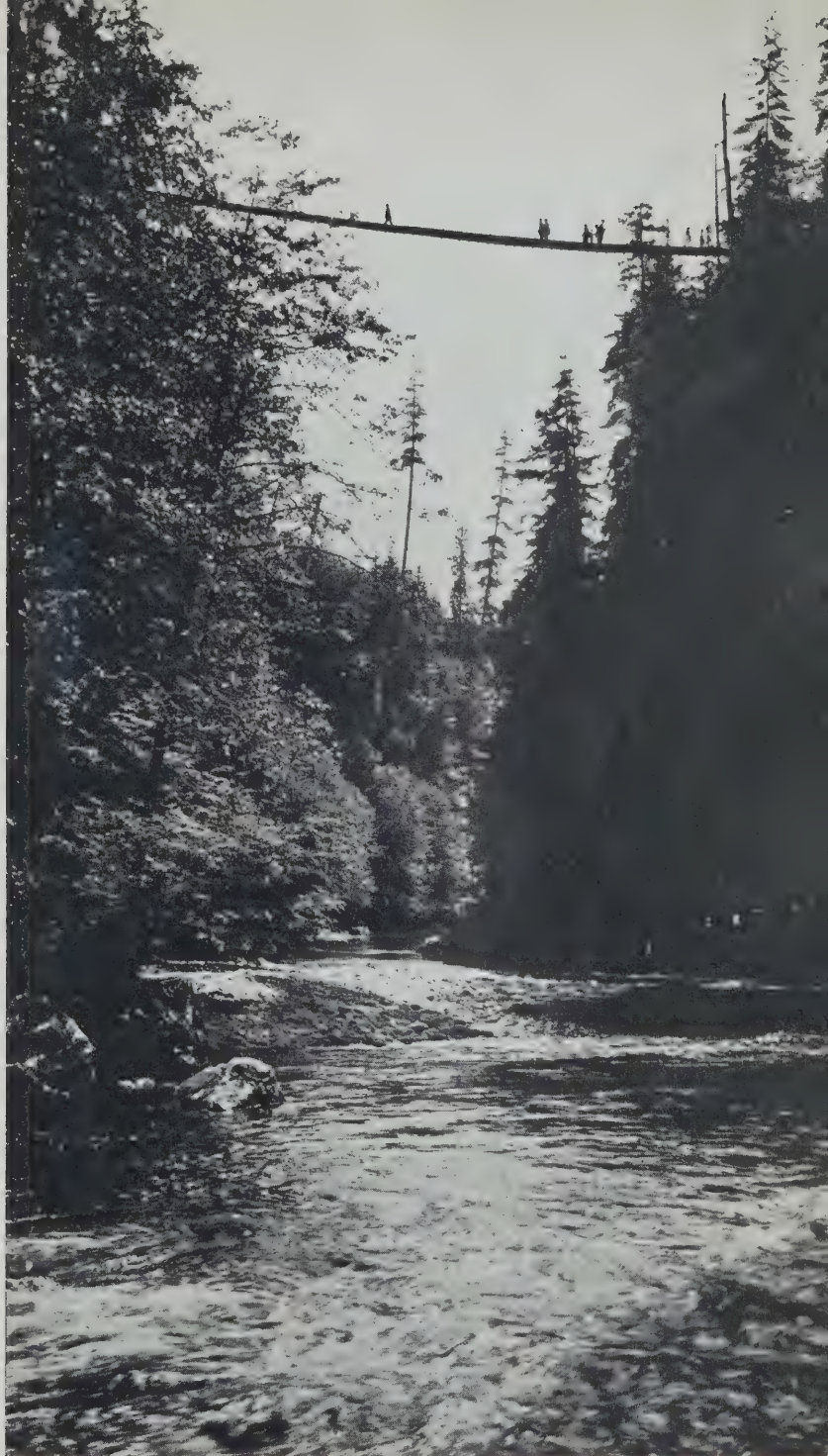
Je devrais peut-être faire le point sur cette obturation non nécessaire des canaux inaccessibles en première instance, car j'ai disserté, par ailleurs, sur la possibilité d'élargissement électro-chimique de certains canaux insondables (3). Cette étude avait pour but de satisfaire le désir des praticiens qui préfèrent obturer, sinon tout, au moins le plus possible. Cependant je crois que cette manœuvre est inutile. N'est-il pas établi qu'après la stérilisation effective des zones inaccessibles, l'antiseptie légère des seules régions accessibles est suffisante à entretenir la stérilité du voisinage? L'expérience le prouve tous les jours, puisque, jamais, on n'obture les canaux accessoires.

* * *

Jusqu'ici, nous n'avons envisagé que le côté anti-microbien de la guérison; or, celle-ci comporte également la résolution des phénomènes biologiques réactionnels.

Cette résolution est spontanée, dès que la réaction n'a plus de raison d'être, dès que la septicité a disparu, et que, par phagocytose, les débris microbiens et tissulaires périapicaux ont été résorbés. Toutefois, la spontanéité de cette résolution n'est pas admise par tout le monde et certains prétendent qu'elle doit être le fait d'une action médicamenteuse, c'est pourquoi, souvent, on parle d'action stimulante des défenses biologiques ou d'action recalcifiante, pour justifier tel ou tel mode d'obturation. Je sais que j'aborde là un terrain sur lequel des contestations pourront être soulevées; aussi me contenterai-je, aujourd'hui, d'élaborer des considérations, bien plus que des conclusions.

(3) *Semaine Dentaire* du 26 mai 1935. (Principe de l'élargissement électrochimique des canaux dentaires).



Swaying cable-supported bridge 210 feet
above the glacial foam-flecked river.

Photo courtesy Vancouver Tourist Association.



ARTHUR L. WALSH, D.D.S., F.A.C.D.,
Montreal, Quebec

President of the Canadian Dental Association.

Dean of the Faculty of Dentistry, McGill University.

Past President of the American Association of Dental Schools.

Member of the Medical Boards of the Montreal General Hospital,
Children's Memorial Hospital and the McKay Institute.

Chairman of the Children's Dental Committee of the Junior
Red Cross.

Fellow of the American Academy of Dentists.

Fellow of the American College of Dentists.

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*The Use of Acrylic Resin in Dentistry**

by W. H. WRIGHT, D.D.S., Ph.D.

Professor of Prosthetic Dentistry and Anatomy, School of Dentistry, University of Pittsburgh

ACRYLIC resin, which is now widely used in dentistry, is a recent development in the field of industrial research, although acrylic acid, from which it is made, has been known during the past one hundred years. Redtenbacher oxidized acrolein and discovered acrylic acid in 1843, but it remained for Bauer, in 1927, to develop a synthesis making possible small quantities of methyl ester of acrylic acid, which opened the way for commercial production of acrylic resin in 1932.

In 1843, the year when acrylic acid was discovered, a few graduates of the newly founded Baltimore College of Dental Surgery entered the practice of dentistry, in which they were destined to work with platinum, gold, porcelain, cheoplasty, vulcanite, and celluloid, without even a glimpse into the Age of Plastics, which, in our day, has been enriched by the discovery of acrylic resin.

The commercial production of acrylic resin, which began in 1932, opened a new field in plastics, not only to the dental profession, but also to the industries which welcomed this new and revolutionary development in the manufacture of modern synthetic resins. By a fortuitous circumstance, a brief account of which will be given later, the dental profession itself has made some important discoveries in

the field of acrylics and these are now regarded as a real contribution to the development and use of acrylic resins.

For the first time in the history of our profession, dental research has been separated from commercial research in the field of plastics. No longer is dentistry obliged to take the crumbs (the by-products of commercial research), or the processes and formulas which are designed for mass production in the industries. Today the owners of the acrylic patents, du Pont and Rohm and Haas, acknowledge the necessity for separate research in preparing highly specialized products for use by the dental profession. Accordingly, they have separate departments, chemists, equipment, and research, all devoted to the development of acrylic resins which will meet the exacting requirements of an oral health service. Since these manufacturers are providing an increasingly high grade acrylic resin for use in dentistry, it is imperative that dentists choose and use only tested and approved acrylic resins, which will be discussed later.

THE NATURE OF ACRYLIC RESIN PRESENTS PROBLEMS FOR RESEARCH

The nature of acrylic resin is the most important problem now occupying the attention of the manufacturers of acrylic

* Read before Academy of Dentistry, Toronto, Hamilton Dental Society and London Dental Society in November 1941.

resin for dentistry. Until its good qualities are understood and its bad ones are overcome or nullified, acrylics cannot provide the ultimate in prosthetic oral health service. Unfortunately most of our present knowledge of the nature of acrylic resin has come from observation of its gross reactions in the dental laboratory and not from the research or testing laboratory. Consequently there are numerous techniques advocated for its manipulation and many explanations of its shortcomings. Obviously, partial studies of acrylics are not enough; the physical properties and the chemical reactions of the resin must be investigated. This viewpoint is confirmed, for instance, by the universal confusion, before 1925, in the casting of golds in dentistry. When the nature and reactions of dental golds and investments were known, it was relatively easy to make an accurate casting, or to increase or decrease its size by the use of materials and procedures made available through dental research. Today, the gold casting is no longer a problem in dentistry—thanks to research.

Acrylic resin is now in the position formerly occupied by gold. It is the object of concerted research by the Bureau of Standards, dental schools, dental practitioners, and dental manufacturers, among whom the makers of Vernomite have made and continue to make outstanding contributions to an understanding of acrylic resin.

CHEMISTRY OF ACRYLIC RESIN

Methyl methacrylate is a synthetic resin derived from ethylene, a gas obtained from the distillation of coal and chemical reactions of limestone, air, and salt as follows:

Ethylene (C_2H_4) is produced by the distillation of coal. It may also be obtained from petroleum and by synthetic production from acetylene, which in turn is an electric furnace product of coal.

Limestone supplies quicklime and car-

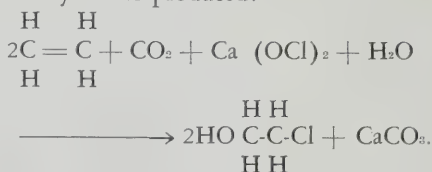
bondioxide:— $CaCO_3 + CO_2$.

The air provides nitrogen, which is used in making sodium cyanide ($NaCN$).

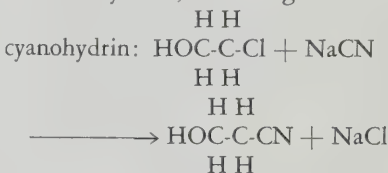
Sodium chloride furnishes the sodium for the sodium cyanide, also the chlorine (Cl_2) which with the quicklime produces the bleaching powder $Ca(OCl)_2$:

$$CaO + Cl_2 \longrightarrow Ca(OCl)_2.$$

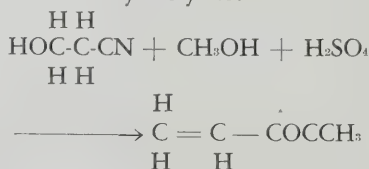
When the ethylene gas and carbonic acid gas are passed into the bleaching powder suspended in water, ethylene chlorhydrin is produced:



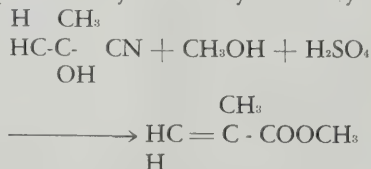
The ethylene chlorhydrin reacts with sodium cyanide, resulting in ethylene



Ethylene cyanohydrin when combined with methyl alcohol and sulphuric acid produces methyl acrylate:



In like manner acetone cyanohydrin when combined with methyl alcohol and sulphuric acid yields methyl methacrylate:



methyl methacrylate.

POLYMERIZATION OF ACRYLIC RESIN

Acrylic resin for dental use is composed of polymeric mono-methacrylic acid esters

intimately mixed with a definite proportion by weight of monomeric methacrylic acid ester to which have been added the desired colouring material and sometimes a plasticizer to soften the mass and retarders or hasteners to slow or speed the rate of polymerization. The chemical process, polymerization, by which the denture is cured, consists in the union of two or more molecules of the same kind to form another compound having the same proportions, but a higher molecular weight and different physical properties. As an example, the powder-liquid denture acrylic resin now available in the dental market consists of a polymer, the powder, and a monomer, the liquid. When these are mixed together, the liquid tends to dissolve the powder, after which, by the application of heat, both unite in one solid mass or polymeric resin. The change from the liquid to the solid state, although hastened by light, heat, and oxygen, will eventually take place in all monomers (liquids) without the aid of these hasteners. The chemical nature of the monomeric compounds is such that the molecules continue to unite in long chains, whereby the solid resin is formed. Polymerization may be retarded by the addition of small amounts of hydroquinone, by the exclusion of oxygen, by darkness, and by cold. Any or all of these methods may be used during the making or storing of acrylics. Polymerization, when once started, is retarded with difficulty, as is seen in the short shelf-life of the "gel" form, which must be kept in airtight, light-excluding containers and stored in refrigerators. While the general process of polymerization is not well understood, it is known that the fit and strength of acrylic dentures may be ruined by improper curing. Therefore manufacturers of acrylic resins should know as much as possible about the cause and control of changes which occur during the polymerization of acrylic resins for dental use.

ACRYLIC RESINS FOR DENTAL USE DIFFER FROM INDUSTRIAL ACRYLICS

Acrylic resin was used in the industries before it was available for use in dentistry for the following reasons. In the industries, thousands and perhaps millions of a single item, for instance a comb or a brush, are made in a single steel mould, whereas in dentistry each denture is made in an individual mould and that mould is destroyed during the processing. The use of steel moulds makes it possible for the industries to mould the hard resin which, when subjected to high heat and tons of pressure, may be formed as desired. This method cannot be used in dentistry because of low pressure dental presses, relatively weak plaster and artificial stone investments, and because of the internal strains common to thermoplastic mouldings. Such strains result in the breakage of dentures. Commercial articles or dentures made by moulding the hard resin under high heat and high pressure (thermoplastic moulding) are not strain-free: that is, they have been pressed into an unnatural shape from which they tend to escape by warpage as the result of "elastic memory." You will recall the frequent breakage through the centre of the palate of upper dentures made of Resovin and Vydon, both of which were thermoplastic vinyl resins. In the industries, this tendency to warp is relatively unimportant since those products are not subjected to the unusual environment of the mouth, and reinforcements may be built into such articles to nullify their tendency to warp. Thus, it will be seen that dentistry requires a denture base material that has been developed especially for the peculiar methods and equipment used by the dentist. As mentioned earlier, dentistry has made notable contributions to this development. In 1936 I was handed a sheet of transparent acrylic resin resembling glass, except that it was flexible, and I was asked if it could

be used in dentistry. Aware of the value of a transparent base for immediate dentures, splints and obturators, I pointed out the difficulty in processing sheets of resin and suggested that a granular or powder form might be heated and pressed into the form of a denture. The granules were obtained and pressed, resulting in an imperfect denture roughly moulded of milky-coloured beads. On further inquiry, I was given a pink thick liquid (this was a monomeric methacrylic ester), a little of which, by way of experimentation, was poured among the acrylic granules or beads while packing the mould. The finished denture was more homogenous, the beads were less evident, and the denture was striated with the pink monomer which had run among the granules. This was the beginning of a series of experiments which under the direction of the makers of Vernonite led to the development of monomeric-polymeric methacrylic "gel", which was marketed before the Strain patent was granted, in 1938.

On the seventh of June, 1938, the Strain patent was granted. It relates to the moulding of organic compounds comprising intimate admixtures of polymeric mono-methacrylate acid esters and monomeric methacrylic acid esters and to the low-heat, low-pressure method of polymerizing acrylic resins already available for dental use. Thus by virtue of its own research, dentistry possessed the low-heat, low-pressure method of moulding acrylics before the Strain patent was granted. This priority right has been conceded by the holders of the patent.

DENTAL RESEARCH IN THE FIELD OF ACRYLICS

Now that dentistry is free to develop acrylic resins for its own use, what are some of the problems requiring research? Perhaps the most important studies now in progress deal with the dimensional stability and fit of acrylic dentures.

Dimensional stability is related to curing shrinkage, to changes caused by the wetting (water absorption) or the drying (dessication) of acrylic resin and to distortion resulting from strains in the cured resin. The following information made available through research conducted by the makers of Vernonite explains some of the unfavourable reactions of acrylic resins.

DIMENSIONAL CHANGES IN ACRYLIC RESIN

Dimensional changes arising from the curing of acrylic resin vary with the shape of the object, as will be shown by comparing a thin sheet of Vernonite with a maxillary denture made of the same material. The thin sheet, cured against a flat glass or metal surface, shrank 0.52 per cent, whereas the denture, cured on a steel model, shrank only 0.4 per cent. If both the cured sheet and denture are thoroughly soaked in water at mouth temperature, the thin sheet will expand less than the denture, about 0.30 per cent, while the denture will continue to expand about one per cent, until it becomes approximately one-half per cent larger than the metal model on which it was cured. This study indicates that although an acrylic denture may be slightly smaller when cured, or when allowed to dry, it expands until slightly larger than the original model when water absorption has reached equilibrium. The subsequent wetting and drying of an acrylic denture will result in similar expansion and contraction respectively. Acrylic dentures should be stored in water when not in the mouth.

STRAINS IN ACRYLIC RESIN

I have already mentioned the undesirability of strains in dentures, and I have referred to the breakage of Resovin and Vydon dentures because of internal strains resulting from the thermoplastic deformation of Vinyl resins. Strains, if present,

are easily detected in objects or dentures made of transparent acrylic resin by examining them with polarized light. Strains are caused by an unequal distribution of pressure which causes some areas of the denture to remain under tension. Strains tend to make a denture dimensionally instable as shown by the tendency of a strained denture to distort when heat is applied. Likewise when immersed in a solvent such as acetone, a strained denture will react differently from a denture without strains.

The effect of strains may be demonstrated by subjecting two thin strips of transparent acrylic resin to 60 per cent alcohol. If one of the strips is bent and a drop of alcohol is placed on the bent and strained surface, the acrylic resin will show numerous white checks which will not appear on the unstrained strip, even though it has been covered with alcohol. The strained strip so treated will not return to its original shape and will break readily. The question arises as to what changes may occur in strained acrylic dentures, inlays, and crowns, if they are subject momentarily to the action of alcohol, ether, or chloroform. Strained acrylic dentures may be deformed by placing them in boiling water which releases the strains. It is obvious that both materials and techniques should be directed toward the attainment of strain-free dentures which are less liable to warp when worn by the patient.

VOLUME CHANGES IN ACRYLIC RESIN

Since the fit of a denture may be ruined by improper curing, the dentist must be careful when processing acrylic resins. The rate of heating, the pressure, the temperature within the resin, and the cooling of the flask must be considered. Studies by Vernon, Sweeney, and Taylor have given a clear picture of the reactions of acrylic resin when subjected to heat and pressure.

The equipment used in such studies

consists of a cylindrical steel mould with a plunger at the top and bottom. This mould is placed in a testing machine and a sensitive dial indicator is attached so as to measure the movement of the plunger while the mould is being heated by an electric jacket which surrounds it. The current input is controlled by a Rheotrol and the temperature is measured by thermocouples in the mould and in the resin. During the testing, the time, pressure, expansion and contraction, mould temperature, and the temperature of the acrylic resin are observed and recorded.

A typical curing reaction observed in the research laboratory is as follows: A ten gram charge of uncured acrylic resin was placed in a mould under 81.5 lbs. pressure per square inch. The temperature of the mould and the acrylic resin was gradually raised for 24 minutes until 172 degrees F. was reached. At this point exothermic reactions took place and the temperature of the acrylic resin increased to 318°F. in three and one-half minutes. During the entire twenty-seven and one-half minutes, the resin expanded about four per cent. As soon as the maximum was reached, the temperature began to drop. This was accompanied by a decrease in volume of the acrylic, which ultimately ended in a contraction of about six per cent. Having expanded four per cent and contracted to minus volume six per cent, the cured acrylic had shrunk a total of about ten per cent and was six per cent less in volume than the uncured acrylic.

PROCESSING AND REPAIRING ACRYLIC DENTURES

Such volume changes during polymerization which are inherent in the nature of acrylic may be partially overcome in ordinary laboratory procedures as follows:

1. The acrylic resin should be of the highest purity obtainable, since impurities and unknown plasticizers and hasteners

lead to uncontrollable variations.

2. The artificial stone and plaster used in casts and investments should be as resistant and stable as possible.

3. Care must be exercised in applying pressure, when packing, so as to allow the teeth to be well surrounded with acrylic before the heavy pressure is applied. Pressures capable of deforming the cast, the plaster matrix, and capable of displacing the teeth are possible with flask and bench presses used in dentistry.

4. The mould must be carefully filled and an excess must be provided to compensate for the shrinkage during the curing. This may be done by adding enough excess acrylic to overfill the flask slightly, but this may cause displacement of the teeth through pressure or it may increase the denture space through failure to close the flask completely during polymerization. The use of the Pryor flask is recommended, provided it is used in such manner as to minimize the strain which it tends to induce in the finished denture.

5. The temperature of the packed flask should be raised slowly through the critical range from 160° to 170° F. allowing enough time for the escape of exothermic heat. The maximum temperature need not exceed 170° F. for two and one-half hours. Repairs should be cured at 165° to 170° F. allowing two to three hours.

6. The heated flask must be cooled slowly, preferably over night, to room temperature before recovering the denture.

7. The denture should be removed from the flask without distortion and polished without generating undue heat.

8. It should be stored in water until inserted.

The following suggestions covering miscellaneous details in the processing of acrylic resin may be helpful.

Tinfoil, originally necessary to prevent blanching, is unnecessary when the tem-

perature of the flask does not exceed 170° F. Tinfoil produces a desirable finish, but it may also be the cause of surface distortion of the acrylic resin, as it is when used with vulcanite. In order to avoid fracturing the teeth when recovering the denture, Aldenol investment may be used in a thin layer over the teeth and wax before completing the flasking with plaster. When properly mixed and carefully applied, Hydroflaskit also has proven satisfactory for this purpose, if boiling water is used sparingly when cleansing the mould.

The cast need not be covered with tinfoil; instead, both halves of the cleansed flask may be submerged in coconut oil liquid soap for approximately twenty minutes, after which only the excess soap is removed by sparingly rinsing them in water. Excess moisture must be removed before packing the acrylic.

The cast is easily removed from the finished denture if it is made of a high grade hydrocal artificial stone. This is done by gouging a groove, with an oyster knife, in the area of the cast corresponding to the ridge and by tapping the cast lightly with a small hammer until the friable stone fractures.

Repairs involving a clean fracture of an acrylic denture, or the replacement of a broken tooth may be made without investing the denture as follows: If the fractured denture can be accurately assembled and held together by the use of rubber bands, or by a plaster index, the fractured margins may be cleansed, coated with a thick monomer liquid, assembled, and held together for several hours, preferably over night. The repaired denture should be finished and polished as required.

In emergencies a tooth may be replaced as follows: The broken tooth may be coated with vaseline, heated with an alcohol torch and removed from the denture with little distortion of the acrylic

socket. The new tooth is fitted, then heated and forced into the acrylic socket which is moulded about the neck of the tooth with a heated spatula and allowed to cool. When a tooth does not fit the socket snugly, proceed as follows: Cut thin shavings from a cake of acrylic "gel" (not liquid and powder). These are mixed with a drop or two of monomer solution until a thick, sticky paste is formed. The socket is lined with this paste, the tooth is pushed into position forcing out the excess gel, which is then packed tightly and built up around the neck of the tooth. A strip of heavy tin-foil is placed over the tooth and held in place with a cloth around the denture. Heat from a curling iron is applied to the tin-foil directly over the tooth and the gel. After moderate heat has been applied intermittently for about twenty minutes, the tooth is allowed to cool. When the resin is fully polymerized the denture may be polished.

SOURCES AND KINDS OF ACRYLIC RESIN

In concluding this subject I want to discuss the advisability of using acrylic resins of known and approved brands.

Acrylic resins are made available to the dentist through two sources: (1) The holders of the patent rights, i.e., du Pont and Rohm and Haas and their distributors, L. D. Caulk & Company, Detroit Dental Manufacturing Company, and the Vernon-Benshoff Company. These companies supply the profession with virgin acrylic resins which have been especially prepared for dental use.

These companies are co-operating with the dental profession in an effort not only to make the best possible acrylic resin for the profession, but also to protect the profession against irresponsible and unscrupulous vendors of unknown products. (2) The second source includes unauthorized distributors not associated with the above manufacturers. They supply so-called "bootleg" acrylics which

frequently consist of reclaimed acrylics, in the form of scraps and waste, left over by the industries, or acrylics which having been prepared for industrial use, are appropriated for use in dentistry. Cracked or reclaimed monomers may contain impurities such as free methacrylic acid, acrylic acid, formic acid, aldehydes, acetone, toluolol, and residues of unknown character. It is impossible to rid these cracked monomers of the many impurities that may be contained in acrylic resins used in the industries, because such impurities are carried over in the distilling process.

Reclaimed and industrial polymers may contain plasticizers such as neutral or dibutylphthalate, butylsebacate, oleic acid, butyl lactate, and others. These are added primarily to improve the moulding qualities of the acrylic resin. However, they may have a deleterious effect on the physical properties of the resin and carry with them the danger of potential toxicity if used in the mouth.

The A.D.A. supports research in the Bureau of Standards, which has done and is doing excellent work in encouraging the highest possible standards for products used in dentistry. Likewise it supports the Council on Dental Therapeutics, which is ever vigilant in protecting the profession and the public by testing and accepting only those remedies which conform to the acceptable standards.

In spite of this research, which is paid for by all dentists who are members of the A.D.A., some dentists, thoughtlessly, or in order to save a little money, use acrylic resins of unknown source and composition. Indiscriminate use of such materials, even if they are cheaper and if they could be proved absolutely pure and harmless, which is doubtful, tends to undermine the progress already made by the A.D.A. in elevating the quality of dental materials, and it degrades dental oral health service to the public. Only

by supporting the manufacturers whose standards are determined by serious research can the profession hope to be supplied with materials which are being continuously tested, improved, and adapted to the specific requirements of the dental profession.

Finally, all dentists have an important decision to make. We must decide

whether we will protect our own interests by encouraging and supporting those distributors who are seriously concerned with perfecting acrylic resin for dental use, or continue to expose both the profession and the public to unscrupulous exploitation by unlicensed vendors of unknown brands of acrylic resin.

Brief Replies to Some Common Questions Concerning Orthodontics *

What factors influence growth and development?

What systemic factors relate to orthodontics and what is the physician's role?

When and how to use muscle exercises, and what benefits may accrue?

When is orthodontic treatment not indicated?

by S. STUART CROUCH, D.D.S., Toronto, Ontario
Associate in Orthodontics, Faculty of Dentistry, University of Toronto

QUESTION 1. What factors influence growth and development?

ANSWER. By way of a brief answer I would limit the title by suggesting that it refers to the growth and development of the face and dental apparatus.

It may be trite to observe that the two main factors which influence growth and development are heredity and environment. We may enlarge these to four by saying that growth and development are influenced by form, function, immunity to disease and psychological reactions. It is difficult to say where heredity stops and environment begins; they merge almost imperceptibly. We are all influenced by heredity: like does beget like, therefore we can expect a growth and developmental pattern in each individual based on the plan of that of his forbears. On the other hand all are influenced by environment. Wolff's law does operate, "function does determine form" to some extent.

We are what we eat to a remarkably high degree. Proper food is essential for optimal growth; it is, therefore, necessary to provide the nutritional elements in an assimilable form and to encourage adequate mastication.

Disease does affect our growth and development and it behoves us to prevent it for that reason as well as for other reasons.

Endocrine glands have a profound effect on growth and development and their influence is gradually being better understood and controlled.

Finally, our mentality affects growth and development. Mental tone is important to appreciate our needs and provide determination to supply them adequately to keep us "on our toes"—mentally and physically fit.

For a more detailed answer the reader is referred to the book "The Human Face" which contains ten lectures by Dr. W. K. Gregory and others, also to the

*A symposium prepared for presentation at the Annual Winter Clinic, Academy of Dentistry, Toronto, Dec. 3, 1941.

recent writings of Drs. Milo Hellman, and Allan G. Brodie.

QUESTION 2. What systemic factors relate to orthodontics and what is the physician's role?

ANSWER. As a general statement I would say that success in orthodontic treatment is in direct proportion to the general health and well-being of the patient.

The physician's role is to see that the child about to undergo orthodontic treatment is in optimal mental and physical health and sustained there all through the treatment period; and to suggest to the dentist anything which may interfere with successful treatment, e.g. allergies, chronic infection, glandular disturbances, malformations etc.

Therefore, the physician should, from early infancy, promote—

1. Normal health.
2. Normal metabolism, especially nutrition.
3. Normal growth and development of the body generally.

In order to accomplish these important objectives for the orthodontic patient, the physician may be requested to co-operate as follows—

(1) To maintain a normal blood picture in the patient.

(2) To remove anything which will interfere with the success of orthodontic treatment, (e.g. infected tonsils).

(3) To prescribe adequate rest, exercise, diet, and otherwise condition the patient so that growth and health may be maintained.

The physician's success in maintaining optimal health and a normal rate of growth will influence favorably the success of the orthodontic treatment.

QUESTION 3. When and how to use muscle exercises, and what benefits accrue?

ANSWER. Muscle exercises, more specifically termed myofunctional therapy, should be prescribed in every case of

muscle hypotonicity—i.e. when muscles are not functioning adequately, or when muscles are not functioning normally, (e.g. mouth breathers).

Myofunctional therapy should be performed for a sufficient time to stimulate growth and development, to overcome abnormalities, to improve muscle tone, and to assure adequate functional power.

The benefits to be expected are:—

1. A general improvement in health and muscle tone through better function.
2. The stimulation of growth and development.
3. The overcoming and sometimes the prevention of malocclusion.
4. The reduction in the length of time of mechanical treatment and in some cases even the elimination of mechanical appliances.

QUESTION 4. When is orthodontic treatment not indicated?

ANSWER. Orthodontic treatment is not indicated:—

1. In cases of severe systemic disease, physical and mental.
2. In cases in which there is severe caries or other dental disease.
3. When patients or parents are non-co-operative as to appointments, care of appliances, mouth hygiene, dental care, or the occasional incorrigible child.
4. In cases of extreme malocclusion or types of malocclusion which are too complicated or difficult for the operator's ability, training, or experience. Severe cases should be referred to the orthodontist. The average man in general practise should limit himself to cases requiring simple types of treatment. For a list of types of cases suitable for treatment by the average dentist, see Dewey-Anderson's *Practical Orthodontia*, Fifth edition, P. 415.
5. Sometimes for reasons of economics or distance.
6. Because of the age of the patient—a compromise may be made in adult cases.

Brief Replies to Some Common Questions Concerning Orthodontics*

How can orthodontists arrange removal of appliances to accommodate the general practitioner?

How often should orthodontic appliances be removed, and who is responsible for such removal?

Should occlusal spot-grinding follow orthodontic treatment?

When is extraction indicated in orthodontics?

by CHARLES A. CORRIGAN, D.D.S., Toronto, Ontario
Professor of Orthodontics, Faculty of Dentistry, University of Toronto

HOW can orthodontists arrange removal of appliances to accommodate the general practitioner?

The orthodontist can arrange, either directly with the patient or through the general practitioner, for the periodic removal of orthodontic appliances, for operative procedures and for their replacement as soon as possible after completion of the restorations.

How often should orthodontic appliances be removed and who is responsible for such removal?

Removable appliances, such as Hawley bite plates, should be removed by the patient, for the purpose of cleansing after each meal.

Fixed appliances should generally be removed by the operator, for adjustment and cleansing, at each appointment. Bands should be removed, the teeth polished and the bands recemented at times varying from three months to one year, depending on the fit of the bands, the oral hygiene, and the susceptibility of the patient to dental caries. The dentist, not the orthodontist, should be responsible for protecting the patient against dental caries.

Should occlusal spot-grinding follow orthodontic treatment?

When an orthodontist has completed

his treatment of a case, it is rarely, if ever, that every tooth is in the ideal functional relationship. Some slight adjustment is necessary, which Nature, in the course of time, and through the process of mastication may improve. On the other hand, the need of adjustment may be of such severity as to cause irritation or injury to the tissues supporting the tooth, and thus becomes a predisposing cause of periodontal lesions. The danger of this can be minimized by judicious equilibration or spot-grinding. Because of his special knowledge and training, the periodontist is the man most capable of rendering this service.

When is extraction indicated in orthodontics?

The history of extraction in relation to orthodontics may be divided into three periods.

First,—the period previous to specialization,—which approximately coincides with the beginning of the present century. During that time the loss of a tooth or even teeth was not regarded as being so serious as it is today; it was a period of more or less promiscuous extraction of malposed teeth, regardless of developmental possibilities, or of ultimate results.

Then followed the second period, extending over about two decades, during

*A symposium prepared for presentation at the Annual Winter Clinic, Academy of Dentistry, Toronto, Dec. 3, 1941.

which, due largely to the advancement in the mechanics of orthodontics, and the introduction of intermaxillary force, it was believed that a regular alignment of the full complement of teeth, and a normal relation of the arches, could be secured without extraction. After a decade of concentrated application of this principle, during which certain cases were successful, while other apparently similar ones were failures, the third period was reached, in which it was realized that a deeper study of the biological factors controlling growth and development was essential, and in which the conviction was forced upon us, that, in certain cases, a compromise treatment, involving extraction, was not only justifiable, but clearly indicated. How, then, are we to distinguish between extraction which may be unjustifiable mutilation, and extraction which may be beneficial service? Unfortunately, no infallible method of diagnosis or case analysis has yet been discovered which will determine, in advance, whether or not a given case possesses possibilities of development which will permit the retention of all the teeth.

A close study of the history and the developmental possibilities of the child, plus a lot of experience, are the best aids in arriving at a decision. As a general rule, permanent cuspids should never be extracted. They lend character to the arch, and should be preserved even at the expense of sacrificing other teeth, usually the first bicuspid.

To consider more specific cases—Supernumerary teeth should generally be extracted. The extraction of deciduous teeth is only justified when a pathologic condition demands their removal, or in cases of too long retention. In the later case it is well to have x-rays to reveal the presence or absence of underlying permanent teeth. The deciduous cuspid should never be extracted to make room for the permanent lateral, as is so often

done, especially in the mandible. When certain deciduous teeth, especially second molars, are prematurely lost, it is often necessary to maintain the space by artificial means.

There are cases in which the teeth in the maxillary arch are too far forward in relation to the cranium, or again, cases where there may be insufficient bony development at the apices of the roots;—too small an apical base to permit of the expansion necessary to accommodate all the teeth. In these cases, where the disproportion between the teeth and the other facial structures is unmistakably apparent, the orthodontist is justified in advising the removal of such teeth as are essential to the establishment of a better balance,—usually the first bicuspid in one or both dental arches. But, as the time of extraction is an important factor, and extensive orthodontic treatment is usually involved, these cases should be referred as early as possible to the specialist.

In class III or mesiocclusion cases, when there is a growth disharmony between the maxillae and mandible, the extraction of the mandibular first bicuspid is often indicated.

Between the ages of sixteen and twenty a crowding or overlapping of the anterior teeth may be caused by pressure from erupting third molars. The second molars may be crowded out of alignment also, either buccally or lingually by the same cause. In such cases the third molars should be extracted. Occasionally, it may be considered desirable to extract second molars to permit the eruption of third molars. Following the extraction of second molars, maxillary third molars will usually move into satisfactory position; mandibular third molars less frequently. Because the mandibular third molar takes longer to erupt into the position of the second molar, it is usually advisable to extract the lower second

molars at least six months in advance of the upper second molars.

Generally, extraction in relation to orthodontics should be resorted to with caution, consideration and conservatism, always keeping in view the possibilities of end results. My advice, therefore,

would be that before resorting to extraction in your orthodontic cases you should take advantage of the consultation service provided by the Faculty of Dentistry, University of Toronto, or that you consult a specialist in orthodontics. I am sure you will find either one very willing to co-operate with you.

Brief Replies to Some Common Questions Concerning Orthodontics*

What use have plastics in orthodontics?

When should overbite cases be treated?

When is it advisable to tip upright converging crowns of teeth to be used as abutments?

When does the orthodontist's responsibility cease?

by G. VERNON FISK, D.D.S., Toronto, Ontario

Associate in Orthodontics, Faculty of Dentistry, University of Toronto

WHAT USES HAVE PLASTICS IN ORTHODONTICS?

IN THE reply to this question, the term plastics will be limited to the acrylic resins chemically designated as methyl methacrylate produced specifically for the dental profession. In orthodontics, this material is particularly suitable for the making of bite plates and inclined planes. Because of its comparative strength, when properly processed, its range of usefulness may even be extended to the construction of space maintainers and for other purposes.

The technique of processing is simple, and the fabrication of these various appliances may be undertaken in the dental office. In cases of breakage they may be easily repaired. If needed, wire springs of precious metal are readily attached to the material, after it is processed, merely by heating the wire in the flame to a

cherry red and pressing the heated wire into the material in the desired position. Altogether, the material possesses qualities which render it especially useful in orthodontic practice.

WHEN SHOULD OVERBITE CASES BE TREATED?

The reply to this question will be limited to the treatment of excessive overbite in the child during the period of growth. Orthodontic treatment for the correction of excessive overbite in the child should be undertaken only after a careful diagnosis has been made. If the diagnosis indicates a supraversion of the anterior teeth or if the lower incisors are causing painful irritation to the soft tissues lingual to the upper incisors, immediate treatment should be undertaken.

If, however, the diagnosis of the case indicates that the excessive overbite is due to retarded vertical growth of the

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jaws, mechanotherapy is most effective if applied during the later stages of eruption of (a) the first permanent molars, (b) the second permanent molars.

WHEN IS IT ADVISABLE TO TIP UPRIGHT CONVERGING CROWNS OF TEETH TO BE USED AS ABUTMENTS?

Such a condition indicated by the question occurs most frequently in a neglected mouth and seldom occurs in the mouth of a patient who receives regular periodic attention from his dentist. It is obvious, therefore, that the ideal treatment is preventive. If it is necessary to extract a tooth, the immediate insertion of a replacement will prevent the crowns of adjacent teeth from tipping towards the space.

When, because of neglect, such a condition presents, the converging teeth should be tipped to their correct angle of inclination before the insertion of the replacement provided the supporting structure is stable and there is little or no bone loss in the tissues gingival to the proximal surfaces of the teeth to be used as abutments.

WHEN DOES THE ORTHODONTIST'S RESPONSIBILITY CEASE?

An orthodontist's responsibility to his patient ceases during, or following active treatment for any of the following reasons:—

1. Lack of co-operation of patient.
2. Upon request of parent or dentist.
3. Inadvisability of continuing treatment because of:—
 - (a) Ill health of patient.
 - (b) Case not responding normally to treatment.
4. Parent not carrying out previously arranged financial responsibility.

In other cases, following treatment, the orthodontist should observe the case for a period, which will vary with the severity of the case and the length of time of the treatment, before referring the patient back to his dentist. Observation of the case should be continued by the dentist until the dentition is completed. If, during the observation period by either the dentist or specialist, active treatment is indicated, it is their responsibility to so advise the parent.

Conventions

29TH ANNUAL MEETING OF THE AMERICAN ACADEMY OF PERIODONTOLOGY,
COPLEY PLAZA, BOSTON, AUGUST 20-22, 1942.

Members of the Canadian Dental Association interested in Periodontia are invited to attend this meeting of scientific papers and clinics. Raymond E. Johnson, Secretary, 824 Lowry Medical Arts Bldg., St. Paul, Minn.

AMERICAN DENTAL ASSOCIATION, BOSTON, MASS., AUGUST 24-28.

18TH ANNUAL FALL CLINIC OF THE MONTRÉAL DENTAL CLUB, MOUNT ROYAL
HOTEL, MONTREAL, SEPTEMBER 23-25.

W. S. Swetman, Secretary, 1410 Guy St., Montreal.

Practical Truism

The profession depends so much on personalities that nobody can tell you much about what to do beforehand. All you can do is to meet situations as they come up, study the experience of others reported in the dental journals, ask the advice of older men, and then try to evaluate it, as it may or may not be right, because theories, practices and situations are changing so rapidly . . ."—C. G. Wodehouse in "Dental Careers", Funk & Wagnalls, 1939, *per Dentistry a Digest of Practice*.

Practice Management

My Work

(This letter, awarded the trophy for being the best of seven competitive papers, was presented by Abbie Pryor before the Alabama Dental Assistants Association, in Birmingham, on April 9, 1941)

DEAR SISTER:

Word has reached me that you have taken a position in Dr. Jones' office and entered the field of Dental Assisting. Dentistry is a young profession and offers a fertile field for advancement and progress.

Looking back over these twenty-one years of experience, I am satisfying my yen to write, thinking perhaps my words will encourage and help you.

Dental Assisting has been "my work."

Dr. Anna Robertson Brown, in addressing an Alumnae Group of an Eastern University, said: "Let us lay hold of Work. There can be no happy life without strenuous, unremitting work in it, work which occupies body, heart and soul. Let us not try to escape it nor shirk it." In dental assisting you will find unremitting work; however, there is none other more interesting nor fascinating for a young woman with enthusiasm, energy, intelligence, and a keen desire for service. Every phase of the day's work is an adventure calling for ingenuity, tact, and wisdom. You will be hostess, book-keeper, chair assistant, laboratory technician, and psychologist.

Let us start the day with this thought from Dr. Trumbull, "Today is, for all we know, the opportunity and occasion of our lives. On what we do today may depend the success and completeness of our entire lives." With this thought can there be anything but enthusiasm for our work? Dr. George Crane says, "Enthusiasm in the dental office breeds success."

The reception door is opened; our day's work begins. Is the reception room in order and clean? Remember the adage, "Cleanliness is next to Godliness." Has the maid done her work well? Even so, your personal touch is necessary to give the room a little more appeal. Rearrange the magazines—which, of course, are current—adjust the draperies, blinds, and windows. A growing plant adds to the warmth of the room, and fresh flowers if possible. Perhaps your doctor is a horticulturist at heart and grown them, but you will have pleasure in arranging them. The subject of "Flower Arrangement" is a fascinating one. Much has been said about the reception room, for it is there the patient receives her first impression of your office. I well remember the one in the first office when I began my career—long room, gray walls, no floor covering, no pictures—just stacks of old books and papers and chairs from the attic. Did he need an assistant? I was his first one, anyway. If you do not like your reception room now, make it as cozy and comfortable as possible. In a short time you will learn "how to handle people" (remember how you could work Dad?) and make your doctor realize the need for new decorations. Do not be too hasty in condemning his taste; remember, he is a Smart Fellow.

The operating room now demands immediate attention—the hour for the first appointment is drawing near. Did you ever see such an interesting place, with so many fascinating gadgets? Weren't you lost your first day? I was. Do not

get discouraged; it will take years to familiarize yourself with your duties in that one room. The subject will never be old, always new, with your doctor changing his ideas frequently. One *must*, for the operating room is "a place for everything with everything in its place." The doctor will not want to play hide and seek every day—your hiding and his seeking the instruments.

At first glance, you will notice the appearance of the room—clean curtains, clean chair covers, and fresh linen on the head rest. Drat that maid! She didn't dust the base of the dental chair; she never brushes the foot rest, nor cleans the porcelain top of the cabinet. So many little things that your eagle, critical eye must observe and take care of hurriedly. Now you must give some attention to yourself before that patient arrives.

Your appearance and that of your doctor must be immaculate. How the appearance of the assistant and the dentist has changed in these twenty years! My first uniform was a Hoover apron, frequently worn over my dress in the winter time and spreading to show my petticoat in summer. Have individual uniforms with long sleeves and a becoming neckline. Do not follow the line of least resistance and use gowns from the linen supply; they are never properly laundered, and invariably one day your uniform is too large and too long, the next day too small and too tight. Your hair should be neatly and becomingly arranged. Perhaps your doctor would not object to a cap. They do give you a more professional air. Members of the American Dental Assistants Association use their official cap. I know you will become a member soon. I will mention the benefits of that later. Did you notice your nails? Red or dark nail polish is taboo, and one of my doctor's pet aversions. Well-groomed hands are essential. Do not forget to polish and clean those white

shoes. As a high school girl, you thought your social standing was rated higher if your saddle oxfords never met the white polish. Not so in your office—your shoes and laces must be white.

If Dr. Jones has not been accustomed to changing from street clothes to professional attire, encourage him to do so. His patients may be allergic. One morning, some years ago, the doctor came in too late to make a complete change, so slipping into his fresh operating coat, the patient was asked in. A moment or two after he made his appearance in the operating room, the patient started sneezing, then said, "Doctor, have you been around any horses?" Well, it developed that he had been out admiring his new saddle horse which explained his late arrival. Was his face red! He was wearing the same trousers he had worn to the barn.

The telephone rings—one shoe on, the other off, but you must answer, — it rings again — you are impatient—but stop. The telephone is the voice of your office. It must be pleasant and intelligent and courteous. That telephone call may be the "occasion of your life." At the other end of the wire is a new personality, and opportunity to make a new friend for yourself and the doctor. Guard carefully against quick answers and improper inflections of your voice. Pay close attention to the voice of the person calling and make written notes of names and always end the conversation with a pleasant "thank you."

The gong sounds, announcing the arrival of Mrs. Smith, who has the first appointment, or perhaps a new patient, a newcomer to your city who has been referred to you. Now you are a hostess, pleasing, confident, and tactful. Here you will use all your gracious charm and naturalness. If the person calling is the one whom you are expecting, all that is necessary to say will be, "Good morning,

Mrs. Smith." Do not forget to call the patient's name; it is flattering to have one's name remembered. You should consult your appointment book before entering the reception room. That person may be a stranger; if so, tactfully ascertain his name and business. It may be he is just another salesman. Do not forget, however, that his business is all important to him, so do be courteous. He may some day need the doctor's services. When a new patient is seated in the chair, an introduction to the doctor will save any embarrassment. The patient is the important one, so call his name first, "Mr. Brown, this is Dr. Jones." There are few exceptions to this rule. In your effort to be friendly and make your patients comfortable, do not be intrusive or intimate. There is a difference between dignified cordiality and aggressive friendliness.

Your duties as secretary will be many—enough for one person alone in a busy office. You must make all appointments with a knowledge of the work in progress, so as to allot sufficient time for the operation and not crowd the doctor. Keeping patients waiting too long is bad on everyone's nerves. Keep a recall list and use it promptly. The patient is checking on you and will tell you about it if you are late. However, ask the patient's permission to place her name there. You will receive, post, and bank all monies, check, pay, and post all office expenditures and keep correct professional records. You will mail statements and write thank-you letters for referred patients. Consult the doctor as to his preference whether these should be written or typed. Personally, I like the written statement best. All letters pertaining to his professional affairs should be typed with carbon copies filed for reference.

To be accurate with professional records, you must learn much about teeth

and anatomy, the surfaces of the teeth, mesial, distal, lingual, buccal, occlusal, and types of fillings. The record in your office may be letters or numerals but you will have to be familiar with them. I like to use different coloured markings for different types of restorations. Too, I have found it easier to take every patient's chart out of the file at the beginning of the day's work and keep them conveniently near during the operating procedure of the day.

In 1925, a new machine was installed in our office—the x-ray. Another opportunity to make myself more valuable to the doctor. I was thrilled when he entrusted me with the responsibility of making the radiograms, which is permissible in our state, and had me take a course from one of the nation's leading radiodontists. The mysteries revealed by that machine and later in the dark room are always interesting, every patient's picture presenting a correct mounting and filing completely interesting. Do keep a small flashlight in the dark room, as many times you will need to find a file dropped while developing. An interval clock will save you many minutes of just waiting.

Every film should be mounted with patient's name, date of exposure, by whom referred, and filed with the patient's record, or alphabetically if a separate file is used. As you become more familiar with anatomy and the reading of the radiograms do not forget you are not the doctor, and in no way should you offer any interpretation of the film or diagnosis. You may show how a filling is revealed more dense than the enamel, or the pulp chamber, if the patient is interested. The film manufacturers will be glad to mail you periodicals on the progressive ideas in radiography and manuals on technique for various exposures that will be helpful.

The laboratory, the dump room of all

dental offices, has always been my problem, yet I am happier there for I adore making a mess. Pouring models, making base plates, setting up teeth in correct occlusion, vulcanizing dentures, especially acrylics, takes me back to childhood and my mud pie days. Taking a wax pattern for a crown or inlay and hoping to bring forth a perfect casting calls for all my powers of careful technique. Do not be discouraged if you fail at first—even the dentist fails sometimes. You will never lose that feeling of uncertainty when you melt the gold nor the pride of accomplishment when you have a perfect casting that brings commendation from your employer. In your laboratory do not have, as one doctor said, "A place for everything—one drawer." Keep this room as clean and neat as possible. Neatly label your study models and file them in an accessible place.

As you become more efficient in your office, you will have learned much about medicaments, their names and uses. A study of "Materia Medica" or a "Dental Formulary" will help you many times. Keep your bottles neatly labelled in the operating cabinet and in storage space.

The purchasing of supplies will soon be delegated to you, so study them carefully. There are hundreds of little things used every day that must be kept on hand ready for use. Learn the prices and, if possible, be economical by buying in quantities. Know the types of materials used and their manufacturers. Be a friend to their representatives; believe me, they can be one to you, giving you instruction on the correct way to use their materials. The doctor doesn't often take time to show you these things, yet expects you to know.

There are so many important things I want to tell you, but this should in-

terest you. In your city is a dental assistants' group. Interest yourself in that. They have so much to offer a young girl starting in the profession. Study courses in first aid, psychology, dental anatomy, sterilization, and many other subjects of vital interest and importance to you. They will at times present clinics on care of instruments, care of hypodermic syringes and needles, surgical dressings, silicates, proper ways of mixing amalgams and cements, how to properly care for dental equipment and so many other subjects that will help you to be more efficient. *THE DENTAL ASSISTANT*, the journal of the American Dental Assistants Association, will come to you with your membership. It contains so many helpful suggestions and articles that will be inspirational and educational. If you give your best, then the best will come back to you.

Never lose an opportunity to study and read. Every week articles are published in dental journals and come to your office that will aid you and broaden your vision and knowledge of dentistry and dental health. Then you will be an intelligent, informed, and interesting person, invaluable to any dentist and appreciated by the doctor for whom you work.

So this has been my work and I am still enthusiastic. Now it is your work. I hope you will always feel as I do about it and Henry Van Dyke expresses it so fittingly:

"This is my work, my blessing, not my doom
Of all who live, I am the one by whom
This work can best be done in the right way.
Then shall I see it not too great nor small
To suit my spirit and to prove my powers;
Then shall I, cheerful, greet the labouring
hours,
And ventur'd turn, when the long shadows fall
At eventide, to play and love and rest
Because I know for me 'My Work' is Best."

The Dental Assistant, August, 1941.

"Don't stop with telling your boy to do right. Show him how."

The Forum

• VITAMINS*

(Bulletin of the Committee on Pharmacy and Therapeutics of the University of Illinois.)

LITTLE did Casimir Funk realize when he coined the word, "Vitamine," that he was furnishing the catchword for a \$100,000,000 business. Probably nothing has captured the imagination of the public so thoroughly as the vitamin deficiency question. Only in part is this due to advertising; a good share of the fault rests with the medical profession which has indiscriminately prescribed vitamin capsules, tablets, elixirs, etc., on the theory that some good might be obtained, that no harm can result, and that since all is not known about vitamins, there may be some hidden elixir of health, some spark of prolonged life, some all-powerful corrective enclosed in the gelatin seal or compressed tablet. In comparison, one should not smile at the theriacs and treacles of antiquity until one has thoroughly enjoyed the potpourri of the modern vitamin capsule.

Ironically, the greatest trade in vitamins is in communities where there is sufficient money to provide adequate diet. A person financially unable to provide a balanced diet cannot afford to buy the expensive vitamin products. The self-conviction that one is vitamin-deficient is almost of paranoid quality; the premise is false, but the results are satisfying.

Vitamins are a necessity. No one can doubt that living organisms require these substances, but their use should be, and in these times must be, limited to those individuals who actually require them. A priority on vitamins would do much to settle the embarrassing problem of

inadequate supply when there is sufficient for all who need them.

There are three classes of people who actually require vitamin therapy: those who have insufficient intake, those who do not absorb them, and those in whom the agent is apparently ineffective when absorbed in ordinary amounts.

Insufficient intake may be one of two types. A diet by necessity may be so restricted and limited, either due to poverty or disease, that it is unbalanced. In this sense there may also be deficiency in fats, carbohydrates, proteins, or minerals. Secondly, an individual who is comparatively healthy and financially able may develop an inadequate diet through individual dislikes to foods, the variety of foods becoming more and more restricted until insufficient vitamins are ingested. This condition is most efficiently and economically corrected by the eating of balanced diets. Naturally, patients on necessarily limited diets must have vitamins added. The eradication of poverty is progressing at a rate consistent with our way of life, and the dietary needs of vitamins is being considered seriously (fortified bread).

There is a group of individuals, apparently normal in all respects, who do not have the ability to absorb vitamins when taken in ordinary amounts. If more vitamins are taken, according to the law of mass action, more vitamins are absorbed, and in this way a deficiency may be prevented. A subgroup, large in proportions, is composed of those individuals who prevent absorption by taking cathartics. The more active cathartics eliminate the vitamins, and the oily types (e.g., liquid petrolatum) are apt to dissolve the fat soluble vitamins (A, D,

*Bulletin No. 12. Manuscript submitted by Dr. W. J. R. Camp, Department of Pharmacology, University of Illinois College of Medicine.

K, F) and thus prevent their absorption.

In the last group are those individuals who, in reality, are not suffering from a lack of vitamins, but rather a disturbance in their internal metabolism. In these the possibility of mass action from additional intake may help to correct the deficiency.

The statement is too often made that vitamins are harmless. We know that in large amounts they are toxic; however, it is quite difficult to say just what amount may be toxic. Certainly idiosyncrasies exist; therefore, one would think that a toxic action is not beyond plausibility.

The possibility exists that the persistent absorption of large quantities of vitamins may so alter cellular metabolism that a higher concentration of vitamins may become a necessity in order to effect a normal intake.

The fact that such small quantities are necessary leads one to conclude that these substances are highly active and should not be treated as indifferent harmless substances.

They should be used only when actually needed and not allowed to become a passing fancy (or placebo) for the majority of the people.—*Fortnightly Review of Chi. D. Soc.*, Feb. 1, 1942.

• THE SCIENTIFIC DETERMINATION OF LOCAL AND REGIONAL ANAESTHESIA

by CAPTAIN C. A. TINN, H.D.D. (Edin.),
L.D.S. (Eng.), The Army Dental Corps.

(Excerpt from *The Dental Record*, February, 1942.)

THE importance of *freshly made* solutions is probably much greater than is generally realized. Physical factors are probably equally as important as the chemical ones as it has been stated that "the double distillation of water greatly enhances anaesthetic efficiency."

The most important factor is probably the hydrogen-ion concentration (pH).

The local anaesthetics in common use are acid in reaction for stability, (pH 3.4 to 5.0), the cocaine or procaine being in the form of the hydrochloride, borate or benzoate.

The fixation of the anaesthetic agent to the acid radicle prevents its free ionization, so that its potential and selective action on the nerve tissue is greatly restricted. It is only in an alkaline medium and in a readily hydrolytic form that it will undergo free ionization and will be able to exert its maximum anaesthetic action.

Attempts at alkalinization are being made by having two separate stale solutions, one containing the acid anaesthetic, the other a solution of sodium bicarbonate, to be added to it immediately before use. Tests with these anaesthetics have not proved any great superiority over the usual acid solutions.

The perfect anaesthetic will, I firmly believe, be produced by having an alkaline phosphate with the procaine and adrenalin salts in the dry condition, consisting only of the pure salts, and mixing them with distilled water immediately before use, thus producing a fresh, sterile, anaesthetic solution having the correct hydrogen-ion concentration.

COLORADO SPRINGS (Colorado)

Gazette: A store mailed Doctor J. E. Huff of Kansas City, a box of neckties. Enclosed was a note expressing the opinion he was too busy to do his own shopping and the hope that he would appreciate the selection and the request that he send a check for \$11.00. The dentist sent to the store an old set of artificial teeth, a note saying he was certain they should fit someone in so large an establishment, and a bill for \$100. Next day a young woman from the store brought back the teeth and collected the neckties.—*Oral Hygiene*, March, 1942.

• **THE DENTAL PATIENT**

by Brig. Gen. LEIGH C. FAIRBANK
*Condensed from the Army Medical Bulletin,
Dental Supplement*

THE dental patient in the Army presents a new experience to the dental officer who has but recently arrived at his first station. In private practice he has been called upon to make his service the finest in the patient's experience, realizing that such effort plays an important part in the development of a valuable practice.

Conditions in the Army are far different, for here one's patients are ordered to the dental clinic for necessary dental care. There is no question of what the soldier wants; the dentist simply renders the dental service of his choice. This new experience wherein the dental officer can decide what the dental service will be without asking the soldier or even telling him what he proposes to do may so warp his judgment that his action may greatly injure the status of our dental service.

Every facility is rapidly being made available in every camp for complete dental service of the highest type. The dental officer must render nothing less than the best, most conservative and most complete dental service for every soldier who enters the dental clinic for treatment. By conservative treatment, there is implied decision based upon sound judgment, sympathetic understanding, and fine professional concept of the patient's needs and the conditions of the immediate situation. Professional pride and bearing should be doubled because of the status as an officer.

Besides rendering the finest service, the dental officer should encourage, by his attitude toward his patients, the development of pride on the part of the soldier. In this great Democracy, of which the Army is the finest expression, composed, as it is of boys inducted from the little village and the fine city home, our Dental service must render the finest service for all soldiers. We expect the best from our

soldiers and they, in turn, are justified in expecting the best from us. The great traditions of our distinguished Medical Department are built upon the splendid service rendered our soldiers since the days of the Revolution.

Service is a much abused word today. It has been used commercially to such an extent in America that most people spell it \$ervi\$e! The Army dental surgeon soon finds that the dollar sign does not figure in his concept of service. He can, therefore, realize the highest motives in his professional experience. The reward for professional service in the Medical Department is the deep satisfaction derived from doing the very best for one's patients. Upon completion of each day, reflect upon your honest effort on behalf of every soldier-patient. Give your patient your best!—*Dentistry a Digest of Practice.*

• **ORAL MANIFESTATIONS OF VITAMIN DEFICIENCIES**

by GEORGE S. McREYNOLDS, M.D., Galveston,
Texas
(Excerpt from *Jour. of Periodontology*, Jan., 1942.)

IN ALMOST every case when a deficiency of one or more vitamins exists, the specific one involved can be diagnosed from findings in the oro-pharynx. In briefly reviewing these changes, we find that a vitamin A deficiency will show first, atrophic and then, keratinizing changes in the epithelial lining of the mouth and pharynx and its associated structures; vitamin B₁ deficiency may show some atrophic changes in the tongue; vitamin B₂ or riboflavin deficiency will exhibit changes about the angles of the mouth and lips; a deficiency of the p-p factor or nicotinic acid results in swelling and redness of the tongue, which has a characteristic appearance, along with similar changes in the buccal mucosa; deficiency of vitamin C results in swelling of the gums with bleeding and loosening of the teeth; vitamin D deficiency results in delayed-dentition and defective development of the teeth.

• DENTAL CARE OF THE PRENATAL PATIENT

by KARL L. SCHAUPP, M.D., Department of Public Health, San Francisco.

(Condensed from *Jour. of California State D. Assoc.*)

THE purpose of the survey of the mouth is to detect the presence of infection. When infection in any form is present it should be eradicated.

Our dentists have found that extractions and treatments of all kinds can be carried out without danger to the pregnancy.

The only time we hesitate to make extractions for abscesses is when the patient is within a week or two of labour. This hesitation is due to the fear on the part of the obstetricians that the protective abscess walls may be broken down to admit bacteria into the circulation and that pelvic infection may follow after labour. We have had no such case, but we have what may be an unwarranted fear of this accident.

The foods which are best suited to give the maximum of both the minerals and the vitamins are the fresh fruits and vegetables. Red meats are also important, especially in the last half of pregnancy in that they supply many of the elements necessary for the formation of blood.

If the average patient would eat a well-balanced diet of good plain food, would watch her elimination carefully and would take moderate exercise in the open air, it would often be unnecessary to supplement the diet with concentrated minerals and vitamins.

Fortunately for the obstetrician, when there is a deficiency in calcium and phosphorus metabolism it usually makes itself evident very early. The first sign is often a slightly reddened gum margin or painful or bleeding gums. The other common manifestation is muscle cramps, especially in the calves of the legs. The bleeding gums indicate lowered resistance which, if allowed to go untreated, opens the way to caries and gum infec-

tion. When these signs appear and if the patient has been on a proper diet, vitamin D is indicated, for increasing the supply of calcium will not increase the retention unless the metabolism is improved.

Milk is probably the best natural vehicle for the administration of calcium. It is rich in this mineral and it is in a form that is easily assimilated. It is, however, not nearly so important as it used to be before the chemical refinements of recent years have given us pharmaceutical products which will give the same result. Medical books and articles on prenatal care still state that every expectant mother should drink at least a quart of milk each day in order that the child may have well-formed bones and need not suffer in later life from defective teeth. This, it seems to me, is only partially true. Naturally, the deposit of lime in the bones goes on constantly and there is a daily need of a new supply to meet this demand, but I do not know of any evidence that there is a sufficient supply carried over after the prenatal period to be of use in the development of the teeth. As soon as the diet of the newborn child becomes deficient in calcium, just as soon will there be evidences of defective skeletal development and a delay in tooth growth. Here, also, even if the lime is supplied, unless vitamin D is added, the development of the child is delayed. It is for this reason that practically all pediatricians at the present time insist on supplying this important substance either in cod-liver oil or directly by the use of viosterol.

• VINCENT'S INFECTION

DR. LESTER W. BURKETT, Philadelphia, spoke at the Greater New York Dental Meeting on, "Diagnosis and Treatment of Vincent's Infection." He gave a comprehensive presentation of the subject, stressing the importance of taking a smear to verify a diagnosis of chronic Vincent's infection by the pres-

ence of the spirochete and fusiform bacilli. The clinician made interesting observations on cases of acute Vincent's infection, treated at the University of Pennsylvania, where best results were obtained by the use of 10% sodium carbonate solution. This was found to be superior to 1:200 tincture of metaphen or 10% arsphenamine in water. For home treatment he advocated the use of 2% sodium carbonate in cinnamon water. —*N. Y. Jour. of Dentistry, Jan., 1942.*

• VITAMIN D, AND CALCIUM AND PHOSPHORUS COMPOUNDS IN DENTAL THERAPY*

(Bulletin of the Committee on Pharmacy and Therapeutics of the University of Illinois.)

IN THE young growing child vitamin D and calcium compounds are essential factors for the good calcification of the growing bones and teeth. These should be obtained by dietary means rather than through medications. Calcium compounds obtained from foods seem to be better assimilated and retained. Foods also supply other necessary nutritional elements not found in purified vitamin products.

In the non-growing adult, although not needed to the same extent as before, vitamin D, as well as calcium and phosphorus compounds, are still an essential part of the diet, since they play a part in the calcification of the bones and the maintenance of the integrity of other tissues. However, such compounds do not play any role in the enamel and dentine once these tissues are fully formed and calcified. The vitamins and calcium compounds can have no direct influence upon the avascular and acellular enamel and dentine in the erupted tooth.

There is no established experimental or clinical evidence that vitamins or cal-

cium compounds have any direct relation to the production or the prevention of caries. There is, on the other hand, evidence, both experimental and clinical, to the contrary. When caries does occur, it may be caused by dietary factors other than the lack of vitamin or calcium compounds. The physical character of the food and the carbohydrate content of the diet play an important part in the production of caries—as does the lack of cleanliness, quality and quantity of the saliva, bacteria, etc.

Recent scientific clinical investigations do not show that caries can be produced or arrested by vitamins or calcium compounds. Therefore, special vitamin or calcium compound therapy is not indicated in the prevention of caries.

While nutritional factors can be related to the growth and maintenance of the alveolar bone and the gingivae in both children and adults, any nutritional deficiency severe enough to disturb these structures is serious enough to warrant the attention of the physician, lest other and more vital structures be affected.—*Fortnightly Review of Chicago Dental Society, Feb. 1, 1942.*

• THE PRESENT STATUS OF THE COMMON COLD

by FRANK J. GERAGHTY, M.D., F.A.C.P.,
Baltimore, Maryland.

(Summary of paper in Medical Times, February, 1942.)

THE common cold is a disease of unknown aetiology. There is no specific or satisfactory method of prevention or treatment. Local therapies as sprays, drops, powders, snuffs, etc., are symptomatic relievers and have no preventive or curative value. Vitamins, sulfonamide drugs and bacterial vaccines, while they may possibly influence the complications, have no value in the treatment or prevention of the common cold.

*Bulletin No. 13. Manuscript submitted by Dr. Isaac Schour, Department of Histology, University of Illinois College of Dentistry.



PRINCE EDWARD ISLAND

SASKATCHEWAN

Editor — M. H. GARVIN, Winnipeg

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Objectionable Advertising

We would call our readers' attention especially to the Correspondence Section in this issue of the Journal. The letters pertaining to objectionable broadcasting should be read as a preface to this editorial.

In the August, 1939, issue of the Journal there appeared an editorial entitled, "Recent Trends in the Journalistic World Affecting the Practice of Dentistry." The tendency in some popular novels to exaggerate greatly the pain equation in the dental office was pointed out at the time. As stated then, the leading man in a highly regarded moving picture production was made to say, "I had a tooth extracted the other day and I yelled so hard it rang the church bells two miles away." At that time one of our most widely-known weekly magazines published a page of pictures which emphasized the pain aspect of dental operations. Another published a most objectionable poem. A leading food producer hoped to gain public favour by presenting a disgusting cartoon, from a dental standpoint.

Most of these problems were dealt with by the Canadian Dental Association and other health agencies, with the result that we gained the hearty co-operation from these organizations in the interests of the health of the Nation. Some of the publications referred to even went so far as to publish

articles and pictures to assist us in our efforts to create a greater national desire for health. We have never failed to acknowledge our deep gratitude for this hearty co-operation.

Recently a similar problem arose in a dramatization on the Maxwell House Coffee program. The correspondence referred to and which appears in this Journal outlines what has been done by the writer with respect to this unfortunate matter. While appreciating their willingness to co-operate we do not agree with the Advertising Agents who prepare the continuity for this coffee program in their conclusion that because only dentists objected to this dramatization that it did not create fear in the minds of numerous listeners. Many people would enjoy a good laugh at the expense of anybody. They would get quite a thrill, perhaps, in seeing someone apparently tortured in a dental chair. All of this does not mean that such programs should be put on the air when it is so well known that they create fear in the minds of many people, when it tends to drive people away from the dental office even if health is sacrificed as a result, and when it interferes with our War Effort.

As was pointed out in the letter to the National Broadcasting Company, this kind of doubtful humour destroys in fifteen minutes a part of what we, as a profession, have taken years to build up. While we cannot help but feel that this Company does not see the danger in this type of program that we, as dentists, see in it, yet we do appreciate greatly its assurance that this offence will not be repeated and that it is prepared to co-operate with us to this extent in trying to build up a public demand for better mouth health and for better general health for all our people.

This is not the wishful thinking of a moralist. It is a definite fact, a truth from which we cannot escape. The problem is vital to every dentist in Canada and in every other country. As dentists we are trying to build a great and glorious edifice wherein the people as a whole can dwell in health and security. Antoine de Saint-Exupéry says, "He who bears in his heart a cathedral to be built is already victorious. He who seeks to become sexton of a finished cathedral is already defeated. Victory is the fruit of love. Only love can say what face shall emerge from the clay. Only love can guide man towards that face." What ought we to do? As dentists who love dentistry let us bear in our hearts a cathedral to be built. Let us support everything which builds up our professional standards. Let us attack everything which tends to tear down those professional standards. Let each of us take personal action whenever an offensive article or cartoon appears on the published page or whenever we hear of an objectionable statement made over the air or from the public platform. Sit down at once and write to the offender and point out the danger to the health of our Canadian people in frightening them away from the dental offices. In most cases you will find the responsible people sympathetic and willing to co-operate when this matter is thoroughly explained. It must be obvious to all our readers that a few

thousand registered objections would prove more effective than one or two, so let us urge you again to act promptly whenever a matter of this kind arises in the future.

In conclusion we would point out that much of this so-called humour would lose its force if we as dentists used greater care to avoid producing pain by the use of our well-recognized methods of premedication, anaesthesia of various kinds and by employing expert operative technique.

CORRESPONDENCE

Objectionable Advertising

Winnipeg, March 2, 1942.

To the National Broadcasting Company,
Radio City, New York City, U.S.A.

Last Thursday evening, February 26, at seven o'clock central time, the Coffee Program was heard in Winnipeg from KFYZ, Bismarck. I am told that this was a presentation over your Red Net Work and was sponsored by the Maxwell House Coffee Company. During this broadcast, a short play was presented on a dental subject which was most objectionable and which caused considerable, very unfavourable comment in this part of the country.

I am told that over 20 per cent of the men who were drafted into the U.S.A. army were rejected on account of mouth conditions. The dental profession has come in for no little criticism as a result of this deplorable condition. The truth is, however, that the members of this profession have given much of their time and money to educate the people to the necessity of a healthy mouth if general health is to be expected. One of the chief obstacles which has confronted us is the idea of "fear" in the minds of so many people, an obstacle which is largely imaginary and which is gradually being overcome until some radio program comes along and, in the name of doubtful humour, destroys in fifteen minutes what we have almost given our lives to build up.

Dentists, social workers who know much of this problem and many intelligent laymen have spoken of this tragedy. Neither the Maxwell House Company nor any other Company can hope to gain the goodwill and respect of the community by stooping to such types of program, nor can the radio company which puts such objectionable features on the air. It interferes with the peace of mind of our people,

It interferes with the developing of a fine, national, health spirit. It interferes with our War Effort.

If something cannot be done to prevent such ridiculous programs from appearing on the air some counter measure will have to be taken against companies who are poisoning the minds of our people.

Surely you can do something to prevent such unfortunate suggestions creeping in to your otherwise excellent programs. There is such a great opportunity to help those who are engaged in the building of the health of the nation and it is so easy to destroy these efforts just for a cheap laugh.

We would like to hear from you in this regard and would appreciate permission to publish your reply in the Journal of the Canadian Dental Association, as the dentists of Canada are greatly interested in this problem.

(Signed) M. H. GARVIN.

Editor's note: The above letter was referred by the National Broadcasting Company to Benton and Bowles, Inc., the agency who prepares the continuity for the Maxwell House Coffee program. The following reply was received from this agency.

Reply

New York, March 23, 1942.

To Dr. M. H. Garvin, Winnipeg, Manitoba.

This will acknowledge with many thanks your letter of March 2nd, which has been referred to our attention, as advertising agents for the General Foods Corporation.

It is indeed unfortunate that our dramatic presentation of February 26th with Frank Morgan was so unfavourably received, as you stated, by our radio friends in your particular locality.

Practically a month has elapsed since the

presentation of this dramatic sequence and in that time we have received a complete and accurate audience reaction to this dramatization. We know you will be particularly interested in the analysis of this audience response. The majority of letters received expressed wholehearted enjoyment of the dramatization—criticisms were in the minority and those criticisms were not based on "fear of the dentist". The only criticisms in that regard were received from dentists which, of course, is understandable. The point we want to stress is that "fear of the dentist" did not enter into the average listeners' thoughts when protesting—only a desire for light and amusing program material.

Of course, we had no intention of criticizing the methods of practising dentistry or of presenting this situation as typical of the experience in a dentist's office. The story explained this fact—the dentist's office was closed, his anaesthetist was gone, his equipment was put away. He attempted the operation only under the vigorous insistence of his patient who was presented as a ruthless character, difficult to refuse.

However, your honest expression of opinion, in behalf of your organization was greatly appreciated. You may be certain we shall avoid presenting in the future, on this program, any material which could possibly be misinterpreted by our radio listeners. After all, our job is to entertain you and your family and we want to do all we can to succeed.

Again thank you for your letter, and of course you have our permission to publish our reply in your Journal. In fact, we hope you will and that its publication will prove our sincerity to our many Canadian friends.

(Signed) ROBERT W. TANNEHILL,
for Benton and Bowles, Inc.

War in China

(Excerpts from a letter written in October, 1941, to the Editor of the Journal of the C.D.A. and other friends in Canada by Dr. W. G. Campbell of West China Union University, Chengtu, Szechwan, China. This letter reached Winnipeg April 6, 1942.)

By the calendar it seems a bit early but from last year's experience of this Christmas effort it is evident that this correspondence should be started on its journey.

The past year has been one marked by a great

and serious rise in commodity prices. None of the oldtimers can remember anything like it. This is mainly evident in the cost of rice but rice here means a great deal. It is really the medium of exchange for food, wages, clothing, travel, school fees and almost everything else of which one can think. There is nothing quite comparable to its position and importance in our countries. All servants and people on salary now draw part of their income by actually receiving the grain which has forced us all into the storage business. In a nine months period, the cost has increased by about 900%, and other things in proportion. It makes us rather smile to hear of your increased costs in percentage when they very seldom are more than one figure. This is partly due to an actual shortage but mostly a result of hoarding and manipulation by people of wealth and position. The war lords are at work although their day is passing. The government has attempted to control prices but there are too many involved in making a good profit out of the present situation. In the spring we were also threatened by a famine but just when it began to look really serious the rains came.

In the spring the new dental wing was completed and my department had its quarters available for the last couple of months of the school year. It has been a great pleasure to again be in rooms designed for teaching. We have now adequate bench space, offices, preparation and store rooms. Several places have not been adequately furnished due to the many demands already met for essentials. It has been a very unfavourable time financially to make this change but is welcome nevertheless. We have been working away at inside details and now have a very neat, clean establishment where routine work can be carried on with pleasing efficiency.

Graduation was marked this year by what amounted to conscription of the graduates in dentistry, medicine, nursing and pharmacy. None were left for private practice. However since this was the first year that some of the government services had started these ventures, not all of them have been called, which has left some individuals a little choice.

Only a few of the community felt they could afford to go to the mountains this summer so life went along on the campus about as usual. For several weeks the heat was pretty trying

but from the middle of July on, the rains made it quite livable.

All spring and summer we have had innumerable air alarms and of course some raids. Those that were only concerned with attacks on the air-fields around do us no damage and we can see lots of the action from our homes. Those that care look. In fact I watched one raid at five in the morning from my bed on the veranda. We had only one bad city bombing. Waves of bombers came over, each one closer to being directly above us and we began to think that it was our turn again. Fortunately this was not the case. There was not much material damage but the loss of life and casualties were heavy. It would make a gruesome picture but a movie of the hospital compound after such a raid tells a powerful story. In many places in the world this is to be seen. However we have two factors that many other places do not have to contend with. One is that we have no defense whatever which allows enemy planes to fly about until short of gas; the other is that almost all medical aid is furnished by the mission hospitals which are, of course, inadequate to handle it all. As we see the war here the Western Powers have a lot to answer for in the past twenty years in Asia. Of late the Chinese seem to be having some success on land but all the reports are not reliable and none of them give any details about the cost of the winning side. All news reports in China, both domestic and foreign, are strictly censored.

This fall we had a 9/10 eclipse of the sun and the weather was good for observation. The Chinese have a superstition that a dog comes to eat up the sun. They beat gongs and make a noise to scare the dog away. You will

be very happy to learn that up to date this has always been successful.

My teaching duties this year are lighter for this term. I am not teaching at National Central University this year and with my new quarters I am having more time to devote to its development. I have written a hand book on my main course and after a year in the press the English is now completed and about 1/3 of the Chinese translated. There are a number of errors in the printing but it seems to be about the best that can be done here. None of the printers can read English and you can imagine how many mistakes might occur if you had to set up type in Chinese.

My main purpose is to wish you all a very Merry Christmas Season and the very best hopes for the year to come. That is an old wish and may sound common but I mean it very sincerely this year. May our light in our various worlds continue to shine before men that they may see our good works and glorify our Father which is in Heaven.

(Signed) W. G. CAMPBELL.

To the Editor, Journal of the C.D.A.

This is to enquire if any members of the profession have been making any use of sulphonilimide as a root dressing or for capping exposed pulps and if so the methods used.

The writer has been using it for some time with apparently satisfactory results. In the case of root dressing the powder moistened with liquid oxapara and in pulp capping moistened with carbol eugenol.

The writer would be interested to learn of the methods and experience of others who may be making use of this drug.

(Signed) D. J. BRASS,
Yorkton, Saskatchewan.

BOOK REVIEWS

Physical Properties of Dental Materials, by William Souder and George C. Paffenbarger, being a résumé of research conducted in the National Bureau of Standards of the U.S. Department of Commerce. Issued in February, 1942. Cloth bound. 222 Pages. 93 Figures. 60 Tables. For sale by the Superintendent of Documents, Washington, D.C. Price, 75 cents.

It was a fortunate day for dentistry when the Research Commission of the American Dental Association went to the National Bureau of Standards in 1927 to arrange the details of co-operative research. Upon this foundation it has been possible to issue lists of certified materials backed by independent tests; criticize techniques; and advise the profession accurately.

Since 1919 more than a hundred reports of the work have been printed in various journals and in Bureau publications. The present publication is a condensation of all of these reports. In this book the dentist will find explanations for some of the many difficulties which confront him daily; such as, excessive expansion of amalgam, shrinkage of gold inlays and solubility of cements. He will find techniques suggested that will reduce the number of these difficulties. The following subjects are discussed: Dental Amalgam Alloys; Dental Mercury; Gold and its Alloys; Base Metal Alloys; Investments; Cements; Impression Materials; Inlay Waxes; Organic Denture Base Materials, and Dentifrices.—*M. H. G.*

Practical Anaesthesia for Dental and Oral Surgery, Local and General—

by Harry M. Seldin, D.D.S., F.I.C.D., F.I.C.A., Consulting Oral Surgeon, Harlem Hospital, New York City Cancer

Institute, and at Peekskill Hospital, Peekskill, N.Y. Second edition, thoroughly advised. Illustrated with 217 engravings. Published by Lea and Febiger, Philadelphia, Pa. Price, \$8.00.

In this book the newer inhalation anaesthetic agents, such as cyclopropane and vinethene, together with the techniques of their administration and physiological details are examined and evaluated. Intravenous anaesthetics are fully described and their use in dentistry and mode of administration is discussed. There is a chapter dealing with anoxemia and its relation particularly to nitrous oxide oxygen anaesthesia. The chapter on analgesia is also expanded. In this edition the chapter on nasotracheal anaesthesia has been revised, expanded and more fully illustrated. Likewise, the new concepts of local anaesthetic drugs and their application have been fully examined.

This book is splendidly illustrated and contains many helpful ideas for the general practitioner of dentistry.—*M. H. G.*

DENTAL CORPS NEWS

Major O.A. Lefebvre

A well known dentist of Montreal who has been Adjutant of No. 24 Company since September, 1940, has recently been promoted to the rank of Major.

Major Lefebvre graduated from McGill University in 1916.

During the first Great War, he served with the C.A.D.C. in Canada and obtained his Lieutenant's commission in August, 1918. On retirement from active service in December, 1919, he transferred to the reserve of officers. He was placed on the general list of the Canadian Dental Corps in October, 1939 with the rank of Lieutenant and in April, 1940 qualified for his Captaincy.

Major Lefebvre was the first residential dentist at the Montreal General Hospital and was superintendent in charge of the outdoor dental clinic. He is a governor of the College of Dental Surgeons of the Province of Quebec.

Major Lefebvre has two sons in the forces, Prob. Sub.-Lt. Pierre A. Lefebvre, R.C.N.V.R. and Aircraftman Rodney A. Lefebvre, R.C.A.F.



Lieutenant-Colonel H. V. Driver

Lieutenant-Colonel Driver was graduated from McGill University in 1914. He is a Past President of the Montreal Dental Club; was Assistant Superintendent of the Out-door Dental Clinic of the Montreal General Hospital from 1914 to October 1916; was Lecturer in Operative Dentistry, McGill University, 1919 to 1923; was Demonstrator in the Out-door Dental clinic of the Montreal General Hospital 1926 to 1939.

Lieutenant-Colonel Driver is a veteran of the Great War, in which he served from 1916 to 1919. He was transferred from the Reserve List of Officers to No. 4, Co'y. C.D.C., M.D. No. 4, Montreal, in October 1939. He was appointed District Dental Officer, M.D. No. 4, with the rank of Major on June 1, 1940. He was promoted to his present rank of Lt.-Col. March 13, 1942.

He is married and has one daughter.



Major D. M. Boyd

Capt. D. M. Boyd, a native of Creemore, Ontario, at present stationed at Valcartier, Quebec, has recently been promoted to the rank of Major.

Major Boyd served in the C.A.D.C. in the last war.

He enlisted in the Canadian Dental Corps in May, 1940 in Winnipeg and was posted in November, to Quebec.

Major Boyd practised dentistry in Emerson, Morris and Winnipeg.

In Morris, Major Boyd was a member of the Council and Chairman of the Board of Works. In Emerson, he was President of the Board of Trade.





Canadian Army Photo.

ARMY RECEIVES SASKATCHEWAN GIFT OF DENTAL CLINIC

The gratitude of the fighting forces for the gift of a mobile dental clinic donated to the Canadian Dental Corps by the Saskatchewan Amateur Hockey Association was expressed by Lt.-Col. G. L. Cameron, D.S.O., acting Director of the Corps which serves the Army, Navy and Air Force. Shown above is Col. Cameron in centre accepting clinic from Capt. J. P. Whyte, C.D.C., of Swift Current, Saskatchewan, former president of the Saskatchewan Hockey Association. At left is Lieut.-Col. D. S. Coons, of the Canadian Dental Headquarters in Ottawa.

Women's Auxiliary M.D. No. 4, Headquarters Montreal, P.Q.

The Women's Auxiliary of the C.D.C. held its third annual meeting on April 22 with Mrs. F. W. Saunders presiding. It was reported that 151,500 cigarettes had been sent to the men overseas during the past year. Chocolate bars had also been sent. Teas were held for the wives and mothers of all ranks. Clothing was given to all men as they left for overseas.

At Christmas the Auxiliary joined with the 6th Casualty Clearing Station (Reserve) in

giving a Christmas Tree and entertainment, when each child of 14 years and under received a toy, candy and fruit. The total receipts for the year amounted to \$1,044.82.

Officers for the coming year are: Hon. Pres., Mrs. F. W. Saunders; Hon. Vice-Pres., Mrs. C. B. Climo; President, Mrs. J. P. Lantier; First Vice-Pres., Mrs. H. V. Driver; 2nd Vice-Pres., Mrs. O. A. Lefebvre; 3rd Vice-Pres., Mrs. H. Ross Cleveland; Rec. Sec., Mrs. H. L. Greaves; Treasurer, Mrs. L. E. Kent; Cor. Sec., Mrs. S. Hershorn.

"He has achieved success who has lived well, laughed often and loved much; who has gained the respect of intelligent men and the love of little children, who has filled his niche and accomplished his task; whether by an improved poppy, a perfect poem or a rescued soul; who has never lacked appreciation of earth's beauty, or failed to express it; who has always looked for the best in others and given the best he had; whose life was an inspiration and whose memory a benediction."—Bessie A. Stanley.

NEWS FROM THE PROVINCES

QUEBEC:

Montreal Dental Club

On April 16 the Montreal Dental Club had as its lecturers Drs. Jack S. Dohan and C. R. Sellar, two of its own members. Both Dr. Dohan and Dr. Sellars read short papers which were followed by practical table clinics.

Dr. Dohan lectured on "The Restoration of Function by Direct Methods and without the Use of an Adaptable Articulator." He demonstrated to all present an ingenious method of taking the protrusive and lateral movements of the mandible, by making use of small castings made to teck alloy.

Dr. Sellar's clinic was given on "Taking Impressions for Inlays and Fixed Bridgework with the Use of Impression Colloid." His method consisted chiefly in showing how to prepare the colloid so that it can be used in a hypodermic cartridge. These cartridges are heated before using, then placed in the syringe and by using a special blunt-end needle of 19 gauge the material is injected into the bottom of the colloid prepared cavity; after which the usual colloid impression is taken. Really beautiful and accurate impressions can be taken with this method.

Dental Nurses and Assistants

The April meeting of the Montreal Dental Nurses' and Assistants' Association was held in the Club Rooms. The speaker of the evening was Dr. A. C. Racey who spoke on "Pathology in Dentistry". The president, Miss A. Crowell, presided. At the close of the meeting a presentation was made to Miss Marjorie McInnes, who is the first member of our Association to join the Women's Auxiliary Air Force as a dental assistant and is at present stationed in Toronto.

The May meeting was a very informal evening and a table clinic on "Helpful Hints" was presented by one of the members. It was put on at the convention and the members were very anxious to have it repeated. A great many knitted articles for the Merchant Navy were received and at the close of the meeting refreshments were served.

NEW BRUNSWICK:

New Dental Act

At the recent session of the Provincial Legislature of New Brunswick, March, 1942, the New Brunswick Dental Society presented a new Act, which replaces the Act of 1929. The act of 1929 had many contentious clauses, which were deleted and others classified, with some new clauses added. The most important change was the elimination of the provision for assistant dentists. The cost to the dental profession for this was the full registration of five dental assistants, thus closing up the Act. The second important point in the new Act was the definition of dentistry, which was not in the old Act of 1929.

Saint John Dental Society Meeting

The Saint John Dental Society held a meeting at the Admiral Beatty Hotel on April 29, with the President, Dr. A. J. Coughlan, in the chair. It was very gratifying to see such a large attendance, also to have with us a number of the officers of the local district of the C.D.C. A short business meeting was held, then the members adjourned to have a very enjoyable social evening. Dr. P. L. Bonnell entertained the group with moving pictures, consisting of dentistry, local scenes and a comedy of yesteryears. To wind up the evening a variety of card games were played and a very delicious buffet supper was served.

Dr. (Major) R. S. Langstroth, C.D.C., in England

Major Langstroth, of Orange Street, N.B., was married to Miss Isabel McConnel, of York, England, a member of the Auxiliary Territorial Service. They took their vows in the national Scottish ceremony amid the ruins of bombed St. Columba's Church of Scotland. Then they went to nearby Anglican St. Savior's Church, which has been loaned to the Church of Scotland since the bombing, for completion of the ceremony. Maj. Donald Porter, Saint John, was best man. Lt.-Col. W. T. Ross Flemington, Sackville, N.B., Canadian Army Chaplain, officiated, with Rev. R. F. V. Scott of St. Savior's assisting.

ALBERTA:

Dr. Bulyea Honoured

In honour of Dr. H. E. Bulyea, retiring director of the University of Alberta School of Dentistry, the Edmonton Dental Society and many visitors met at a dinner meeting at the MacDonald Hotel, May 6.

Dr. S. M. Sneddon paid a glowing tribute to Dr. Bulyea. He concluded by saying, "Character is a coin that passes and must pass current at par value in all countries. You can kill a person's reputation in ten minutes but you cannot destroy the character of the type possessed by our honoured guest. He held the right to have opinions but graciously conceded the same privilege to others. What a true, kindly, considerate gentleman to have been placed in such a strategic position, to build into the young men with whom he came in contact, just those very principles of character as he possesses in such eminent degree!"

Dr. Sneddon then presented the retiring director with an illuminated address and a cheque from the Alumni of the School of Dentistry and his associates in the profession, not only in appreciation of his many years of devotion to dentistry but for his services in the fields of art, nature study, sculpture and photography.

Dr. Robert Newton, President of the University of Alberta, and Dr. J. J. Ower, acting Dean of the Faculty of Medicine, also paid high tribute to Dr. Bulyea as an associate and an efficient and co-operative member of the university staff.

Dr. Scott Hamilton, the newly appointed Director of the School of Dentistry, expressed his appreciation of Dr. Bulyea's leadership in the department throughout the years of their association.

The retiring president, Dr. S. C. Hodgson, expressed for the Alumni their appreciation of Dr. Bulyea's work, for all of which Dr. Bulyea returned his sincere appreciation and thanks.

The Presentation Committee consisted of Dr. P. J. Kendall, Dr. H. R. Maclean and Dr. Faust Gowda.

During the meeting a telegram was read from Dr. A. A. Holliss, President of the Calgary Dental Society, regretting Dr. Bulyea's retirement.

Among out of town dentists present were Dr. N. B. Ness, Camrose; Dr. W. Jansen, Wetaskiwin; Dr. A. Harder, Barrhead; Dr. W. A. Johnstone, Fort Saskatchewan; Dr. J. B. Long and Dr. C. Husband of Red Deer, and several members of the Canadian Dental Corps.

The members of the Society elected the following slate of officers for the 1942-43 term:

Dr. H. R. Maclean, President.
Dr. W. E. Webber, Vice-president.
Dr. J. D. Hawkins, Secretary-treasurer.
Dr. E. A. Deegan, Social Convener.

Amendments to Dental Act

The Provincial Legislature has recently passed three amendments to the Act relating to Dentistry in Alberta. The first simplifies the process of prosecutions of illegal dental practise. The second prohibits anyone from outside the province from advertising over the air or otherwise in Alberta. The third enables the Provincial Board to assess an annual license fee up to a maximum of \$35.00. The present fee limit of \$10.00 was too little to pay the running expenses, particularly while so many men are in the Canadian Dental Corps, apart altogether from the province's decision to subscribe \$4.00 per year to the Canadian Dental Association for each registered member.

Director of Dental School

Dr. W. Scott Hamilton has been appointed Director of the University of Alberta School of Dentistry in succession to Dr. H. E. Bulyea. The appointment is on a part-time basis.

Dr. Hamilton was graduated from the Faculty of Dentistry, University of Toronto, in 1923 and since that time has practised his profession in the City of Edmonton.

Dental Graduates

The following students of the School of Dentistry, University of Alberta, have recently graduated and will receive their degrees this month:

Ames, C.; Baker, A. D.; Cleall, F. S.; Dickson, R. E.; Eastwood, B. J.; Fleming, H. S. A.; Gelfand, S. B.; Johnson, H. B.; McKechnie, D. G.; Mickelson, M.; Upton, W. R.; Walkey, C.; Wright, O.

Calgary Dental Society

At the April meeting of the Calgary Dental Society the following slate of officers was elected for the coming year:

President, Dr. A. A. Holliss.
Vice-president, Dr. L. E. Smith.
Secretary-treasurer, Dr. D. E. Green.

Calgary Dental Assistants

The regular monthly meeting of the Calgary Dental Assistants' Association was held on April 13, at 6.15 p.m. Tea was served by Miss Evelyn Christianson, Miss Gwen Hilliard, and Miss Margaret Auld. Seventeen members were present. The business meeting was conducted by Miss Vera White, President, during which time preparations were made for members to start salvaging paper and bottles.

Mrs. J. Hood then gave an interesting paper on Collections, and a discussion closed the meeting.

Dr. J. W. Clay, prominent Calgary dentist, was the very welcome guest of the Calgary dental assistants on May 11. Following refreshments served by Misses Dorothy Maxwell, Joyce Locke and Margaret O'Brien, Dr. Clay gave a number of helpful points to be observed during the taking and developing of x-rays, and illustrated his address with some interesting and unusual slides.

Miss Louise Simonson, a June bride-elect, was presented with a small gift from the Association accompanied by the best wishes of the members.

—M. G. AULD.

SASKATCHEWAN:

Regina Dental Society

The Regina Dental Society held its closing meeting for the season in the Drake Hotel, April 14, with President, Dr. C. C. Clermont, in the chair. The feature of the program was an interesting discussion on "Dental Health Insurance." The subject was introduced by Dr. C. W. Parker, and continued by Dr. C. H. Weicker, supporting the introduction in Canada of some form of Dental Health Insurance, and Dr. F. S. Van Woert opposing such legislation and regimentation of the profession.

The following officers were elected: President, Dr. D. M. MacFarlane; Vice-president,

Dr. R. N. Reid; and Secretary, Dr. H. M. Schweitzer.

School Dental Clinic

The Regina dentists are doing their patriotic and professional duty in keeping open the School Dental Clinic established some years ago by the City, and which has been left without a dentist owing to the enlistment of both school dentists in the Dental Corps. Each school morning two Regina dentists are on duty at the Clinic, all of the City dentists taking their turn for this important service. They are to be heartily commended, for the modest remuneration allowed does not compensate for the loss in their own offices.

Moose Jaw Dental Society

The Moose Jaw Dental Society held its April meeting in the Grant Hall Hotel, with the President, Dr. F. C. Harwood, in the chair. Dr. Marion Powell, a local physician who specializes in anaesthesia and who recently returned from extensive post-graduate studies in that subject taken in Montreal, gave a very instructive talk and demonstration on recent developments in the field of anaesthesia, with special reference to general anaesthesia in dentistry.

The May meeting of the above Society was held on May 12. Another member of the local Medical Society, Dr. L. G. Bray, gave an informative talk on Hospital Procedure, which would be of assistance to the dentist who is called upon to treat cases at the hospitals. This talk was requested, as it was felt that the dentist, by training and experience, knew much less about the subject than the physician, and the tendency today, is more and more to hospitalization in extensive extractions, and to dental care of ward patients at the request of the physician.

A letter from the Moose Jaw School Board was read at this meeting, asking for the co-operation of the Society in taking care of the dental work in the schools, usually performed by Dr. A. E. Chegwin, the school dentist, now a Captain in the Dental Corps. It was decided to hold a special meeting for further consideration of the subject, and a Committee consisting of the officers of the Society, was appointed to secure certain information in the meantime.

BRITISH COLUMBIA:

B.C. Dental Association

At the Convention held in Victoria on May 1 the following officers were elected: President, Dr. Hugh Munro; President-elect, Dr. G. D. Stibbs; Secretary, Dr. G. C. Darts; Treasurer, Dr. R. L. Pallen, all of Vancouver; Board of Censors, Dr. J. A. Chambers, New Westminster; Dr. Arthur Poyntz, Victoria; and Dr. John Ingledew, Vancouver. — *Victoria Colonist*.

ONTARIO:

Faculty of Dentistry, University of Toronto

ASSISTANCE TO DENTAL STUDENTS

The W. K. Kellogg Foundation of Battlecreek, Michigan, in a letter to Dean A. D. A. Mason of the Faculty of Dentistry, University of Toronto, has offered a grant of \$10,000 to the school to be used for loans or scholar-

ships for dental students. The Foundation director, Mr. Emory W. Morris, points out that the gift is made to encourage students who might otherwise be unable to enter the course of dental studies for financial reasons. The school is directed to select and approve as it decides as proper but on a basis of scholastic ability, character and need in comparison with other applicants. The grant may be divided in any proportion as to scholarships and loans but on money loaned to a student not more than 2½% interest per annum should be charged. As there is greater need for financial help to students in attendance owing to the accelerated course, which means shorter vacation periods, the Council of the Faculty of Dentistry decided to use the entire grant for loans to students until after the war. Dean Mason naturally is very pleased with the splendid offer made by the Kellogg Foundation which has been gratefully accepted on behalf of the Faculty and Board of Governors of the University of Toronto.

Accelerated Course in Dentistry—Second to Fifth Years

	Teaching Weeks	
1942-43		
Mon. August 24, 1942, to Fri. December 18, 1942..... (2 weeks' Christmas holidays)	17	
Mon. January 4, 1943, to Sat. March 20, 1943.....	11	28
Examinations:—March 22—April 10, 1943—3 weeks (preparing by students, writing of examinations, reading papers and tabulating results)		
1943		
Mon. April 12, 1943, to Sat. July 10, 1943..... (6 weeks' summer holidays)	13	
Mon. August 23, 1943, to Sat. December 4, 1943.....	15	28
Examinations:—December 4—December 18, 1943—2 weeks (Preparing by students, writing of examinations) (Examination papers to be read and tabulated during students' Christmas holidays)		
1944		
Mon. January 3, 1944—July 15, 1944.....	28	28
Examinations:—July 15—July 29, 1944—2 weeks (Preparing by students, writing of examinations) (Examination papers to be read and tabulated during students' summer holidays)		

GRADUATION SCHEDULE

Dates of Graduation

	Regular Course	Accelerated Course
1942-1943		
Fifth Year	June 3, 1943	April 10, 1943
Fourth Year	June 8, 1944	December 31, 1943
Third Year	June 7, 1945	July 31, 1944
Second Year	June 6, 1946	April 10, 1945

The Ontario Dental Association

The Jubilee Convention of the Ontario Dental Association with four days packed full with activity is now a memory. A memory that must conjure up a thrill of satisfaction and pleasure for President Dr. E. A. Grant as he recalls his long weeks of planning and completing arrangements which culminated in an outstanding event in the Association's history. A memory that brings a flush of excitement to those attending the meeting as one recalls renewing old friendships, perhaps of long standing, or as one hastens to apply a new idea suggested by a gifted colleague and on further reflection one realizes a debt of gratitude to the corps of clinicians, essayists and exhibitors who so generously gave of their time and talents in contributing to the program. Yes, it was a meeting no Ontario dentist could afford to miss, in his own interests as well as those whom he serves.

HOME COMING

A feature of the convention which seems to grow in popularity is the Sunday evening reception before the convention opens. This year it took the form of an informal musicale after which refreshments are served. Members and their wives attend to renew old friendships and make new ones in a congenial dental family party. The committee in charge of arrangements under Dr. J. G. Perkin deserve commendation for their good taste in sponsoring this program for Sunday evening.

CANADA DAY

It was a fitting gesture on the part of President Grant that the delegates of the Canadian Dental Association in session in Toronto, should be invited to take a part in the Ontario meeting. At the opening ceremonies greetings were presented by Dr. D. D. Wilson on behalf of the Honorable Minister of National Health, by President Woodbury of the Canadian Dental Association and by Dean Dubeau of the Dental School, University of Montreal, and were read from President Oren A. Oliver of the American Dental Association, from Col. W. J. Trelford, Canadian Dental Corps overseas, from Montreal Dental Club, Montreal and from President Cody of the University of Toronto. In the addresses which followed by Dr. Grant as President of the Convention, Dr. Woodbury as President of

the Canadian Association, Lt.-Col. George L. Cameron, acting Director of the Canadian Dental Corps and Dr. Harry Thomson of the Canadian Hygiene Council, one heard a sort of progress report on Canadian dentistry in its various relationships. To the average practitioner in his office routinely serving his patients, these addresses seemed to open up a broad horizon of activity and presented a discussion of problems of vital interest to all, and serving as a fitting prelude to the rest of the Convention.

CANADIAN DENTAL CORPS

Lieut.-Col. George L. Cameron, D.S.O., in characteristic free and easy style gave a lucid review of Dental Corps activity. The Corps serves the Canadian army, air and naval units in Canada and throughout the world wherever located. It serves units of the Royal Navy, Allied Navies, the British Commonwealth Air Training Plan, the R.A.F. in Canada, United Nation's training centres in Canada, Women's Corps in all services, Canadian firefighters overseas and enemy prisoners of war in Canada.

There are more than 250 clinics operated in Canada alone and more than 3 million dental operations have been performed in Canada alone since the war began.

The mobile dental unit is proving immensely practical and popular and is a great asset to the corps both at home and overseas. It is compact, complete in itself, and can be moved from one camp to another with great facility and a minimum loss of time. Indeed less than 15 minutes is required to unpack ready to give service.

Col. Cameron voiced again the great need for more dental officers. He spoke of the accelerated dental courses in all Canadian dental schools—4 years tuition to be given in the next three years. New regulations enacted by Department of National Defence enabled students to enlist in the Dental Corps, receive a private's pay and subsistence allowance and leave of absence to complete the last two years of their course. Reference was made to a class of 60 young men of the Corps now taking dental technical training in the University of Toronto. The matter of two research units, value of documentation, procuring of supplies and many other problems were discussed but the speaker ended on

this note, "We of the Corps deeply appreciate your splendid co-operation in the past, but your increasing co-operation in the immediate future is earnestly requested and confidently expected."

GUESTS

Nearly 200 dentists came to the Convention as guests of the Association, including members of the Dental Corps and visitors across Canada and from the United States. For the most part the American guests came on special invitation to participate in the program and to them the thanks of the Association are extended for their generous contribution to the meeting. Without exception their presentations were of high calibre and the result of elaborate and meticulous care in preparation. Guests are always welcome to the annual Ontario meeting and it is a satisfaction when so many come.

SPECIAL FEATURES

At the President's luncheon honorary life memberships were presented to Dean Arnold Mason and Dr. Sydney Bradley of Ottawa in recognition of their stewardship to the profession.

Brief addresses of greeting were made by Mayor Fred Conboy of Toronto and Mayor Gifford of Oshawa.

The guest of the luncheon was Frank M. Dowsett, a popular wartime speaker, gifted in the art of countering Hitler's propaganda, who called on his hearers to go forward to victory with steadiness of purpose. He made a plea for clear thinking, avoiding mental confusion. Illustrating his point he told a story of a British candy manufacturer who had four sons, two killed in action, one a prisoner of war and one in an air training school near Winnipeg. The candy plant consisted of two large buildings connected by a long conveyor belt, a processing plant on one end and a packing and shipping plant on the other. During the "Blitz" both buildings were destroyed but he writes his son at Winnipeg—"Only the old belt is left, my son, but it is a link between the good 'old' plant with the better 'new' plant we shall build." "There was no mental confusion in such thinking," commented Mr. Dowsett.

He went on and warned against contradiction of feeling-optimism today, pessimism tomorrow; up and down with the news.

"Indecision leads nowhere but to defeat," he continued. "Avoid panic and go forward unafraid; remove contradiction of feeling and indecision by example as we proceed up that last hard part of the slope to the crest of victory."

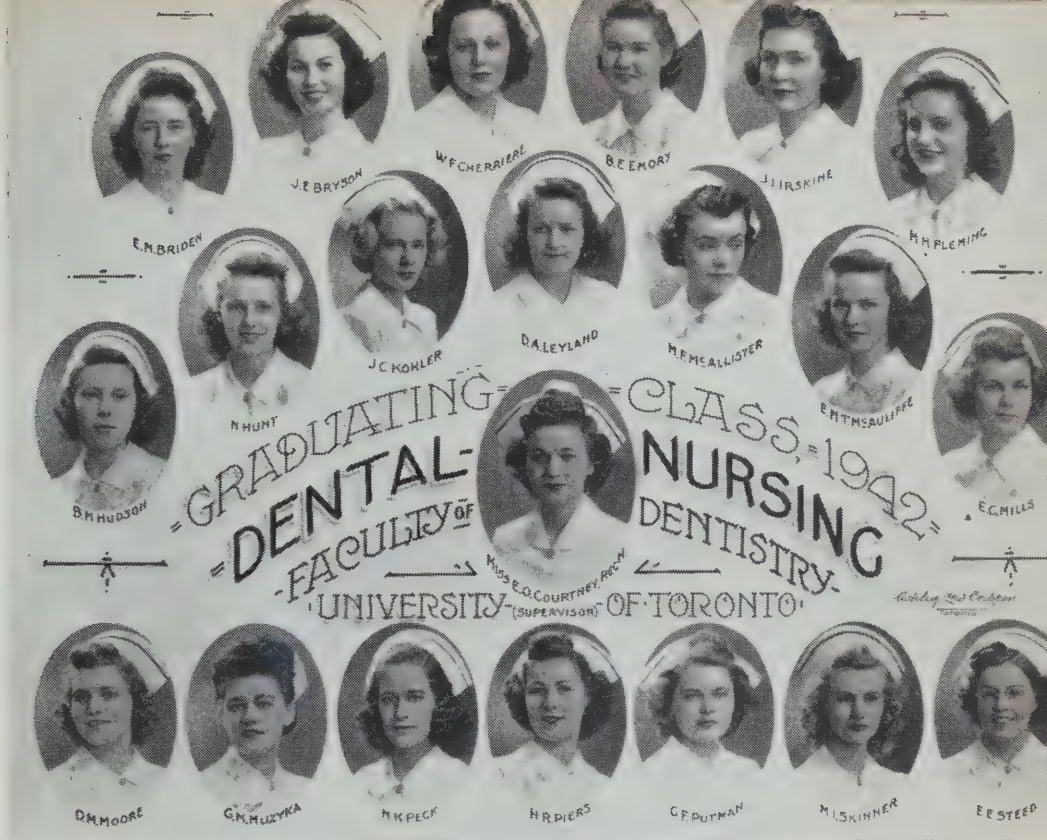
As an entertainment feature Dr. Stuart Couch arranged a presentation of the patriotic review, "Pull together, Canada." It is very difficult to express in a few words the impact of this dramatization, portraying as it does the part of every Canadian, man and woman, in the successful prosecution of the war effort. Individual and class suspicion, intolerance and lack of co-operation were paraded as bottlenecks to united action. To combat these influences a new spirit emerged, promoted by a personal recognition of our own faults, a desire to forget the mote in our neighbour's eye by concentrating on removing the beam from our own and a will to work together for a common cause. This new spirit was indelibly impressed and left ringing in your ears by the young lady playing as a little cockney comedian in a line of her song, "We're all the same underneath, aint we." And so a sympathetic understanding is engendered and a free people emerge, happy, tolerant and united.

OF PRACTICAL INTEREST

The matter of table clinics and demonstrations, more than fifty of them arranged by Dr. Lloyd Grose, President of Toronto Academy, has become a custom and they are always well patronized, indicating their popularity. Lecture clinics, twenty-seven of them, constitute a post graduate course of study in newer developments in dentistry. Scientific exhibits sponsored by the Faculty of Dentistry, University of Toronto, and one through the courtesy of the Mayo Clinic, Rochester, all of which involved considerable preparation and were of especial interest. The commercial exhibits, in spite of a shortage of dental equipment and materials, were of a high order and were carried through in a spirit of co-operative support of the convention.

VISITING LADIES

The ladies' committee convened by Mrs. E. A. Grant left nothing to be desired in arrangements and entertainment for out of town



Members of the 1942 Class in Dental Nursing

ladies. The informal supper dance was immensely popular and well attended. At the Granite Club on the third day of the Convention a luncheon was served for 128 guests after which Mrs. Frank Martin, Mrs. Vernon Fisk and Mrs. Jessie Alexander Miller contributed to the program.

These features coupled with general entertainment items such as the Sunday evening musicale, the stage presentation of "Pull together, Canada" and a night of vaudeville and fun, were provided with the hope that the ladies would feel they had a real part in the Convention.

In bringing this review to a close many items of interest have been omitted or passed over by mere mention. It is hoped, however, that a general conception of this splendid meeting will be apparent. 1201 people were registered including members, guests, visitors, exhibitors, dental nurses and assistants and all voiced the same approval—it was a fine Convention. And so one reflects, "I wish I had gone to that meeting," or "I am glad I was there."—T. R. M.

Graduation in Dental Nursing

The Commencement Exercises for the 1942 class in Dental Nursing was held on June 3, in Convocation Hall, University of Toronto, when the diplomas were awarded by President Cody.

Twenty young women in the course in Dental Nursing have been attending lectures and classes regularly throughout the academic year, and have shown themselves adaptable and capable in the practical work in the various departments. They are as well prepared as possible under college conditions to undertake employment in private dental offices, and should be able to give increasingly valuable assistance under the guidance of the individual dentist.

The majority of the class have already accepted positions but a number are still available. Miss Emory, of Nelson, B.C., would like to be located in Vancouver, but the others who have not yet positions arranged would prefer to remain in Toronto.

Any dentist in these centres who desires the service of a dental nurse may obtain informa-

tion by telephoning MI. 9060 or writing to the office of Dean Arnold D. Mason, Faculty of Dentistry, University of Toronto, 230 College St., Toronto.

The Course in Dental Nursing has added a great stimulus to the service rendered to patients in dental offices. The academic standing of the members of the class, as well as their personal qualifications are such that they are well equipped to give the desired services.

The war has necessitated the enlistment of such large numbers of dentists in the Canadian Dental Corps that those left to serve the civilian population are hardly adequate. The well-trained dental nurse therefore is helping materially to alleviate this condition by assisting the dentist to render a greater service to patients. The nurse is making a real contribution to Canada in these unsettled times.

New Class of Dental Technicians

The Dental Faculty of the University of Toronto is conducting another class of 60 dental technicians for the Canadian Dental Corps under the direction of Dr. R. J. Godfrey. Practically all the members of this class have splendid secondary school qualifications and an enthusiastic desire to avail themselves of the instruction provided for them by the Canadian Dental Corps. The course will continue until some time in September when it is expected this further group will provide technical assistance to the dental officers now giving dental service to the men in the Canadian army, air force and navy.

Oral Surgeons

Last November the society which had existed since 1934 as the Toronto Society of Dental Oral Surgeons was enlarged to include all recognized Dental Oral Surgeons in the province of Ontario. The name was changed to the Ontario Society of Dental Oral Surgeons and the officers named to carry on its business were:

President—Dr. G. A. Morgan, 170 St. George St., Toronto.

Sec'y Treas.—Dr. W. W. Breslin, 206 Bloor St. W., Toronto.

The accepted membership roll of the organization is as follows:

Dr. W. W. Breslin, Toronto; Dr. J. F. Kennedy, London; Dr. J. M. Cation, Toronto; Dr. C. T. Moyle, Hamilton; Dr. W. L. Chalmers, Toronto; Dr. G. A. Morgan, Toronto; Dr. J. P. Coupland, Ottawa; Dr. E. W. Paul, Toronto; Dr. G. W. Everett, Hamilton; Dr. H. G. Robb, Toronto; Dr. J. Johnson, Toronto; Dr. H. M. Robb, Toronto.

It is the intention of this group to present a clinic at the convention of the Ontario Dental Association in May.

Hamilton Dental Association

At the closing meeting for the year of the Hamilton Dental Association held at the Royal Hamilton Yacht Club the following officers were elected for the coming year: Immediate Past President, Dr. R. F. Flach; President, Dr. D. E. Shultis; Vice-president, Dr. F. N. Serena; Treasurer, Dr. G. M. Jackson; Secretary, Dr. A. J. Quick; Chairman of the Program Committee, Dr. W. G. Foster; Directors, Drs. A. R. Poag and W. W. Baxter.

Elgin County Dental Association

Members of the Elgin County Dental Association held their final meeting for the year in the Y.M.C.A. Building on April 9, with Dr. J. B. Clark presiding. The new officers for the year are: President, Dr. H. E. McKellar; Secretary-treasurer, Dr. C. B. Taylor.

During the meeting it was decided to promote the formation of a Ladies' Auxiliary and the matter was delegated to a committee of Drs. McKellar, Riseborough and Dickson. The purpose of the Ladies' Auxiliary would be to co-operate with the other ladies' groups in the Province to send parcels to the boys overseas.

Dr. C. B. Taylor was appointed to meet with the Public Dental Health Committee being held in Toronto during the Ontario Dental Convention.

Dr. L. F. Kreuger of the Faculty of Dentistry, Toronto, was the guest essayist of the evening. His subject was, "Root Canal Therapy."

Dr. Frank Giffin, representative to the Royal College of Dental Surgeons, Toronto, was present at the meeting and spoke briefly.

The meeting closed at 11.45 p.m. with everyone very satisfied with the splendid program that had been provided and with a vote of thanks to Dr. Kreuger for his instructive presentation.

C. G. TAYLOR, *Secretary*.

A Recognition

Congratulations to Dr. Harvey W. Reid, Toronto, on his recent appointment to the University of Toronto Senate.

Dental Nurses' Alumnae Association of Canada

The members of the Advisory Board and their wives, Dean and Mrs. Arnold D. Mason, Dr. and Mrs. R. G. Ellis, and Dr. and Mrs. Frank Martin, were entertained by the members of the Alumnae and the graduating class of dental nurses on May 5, at the Women's Union, St. George St.. President Miss Anna Lindsay presided.

Final arrangements were made for the annual dinner being held at the Granite Club on June 3 in honor of the graduating class of dental nurses. It was announced that a mobile dental unit would be presented to the Canadian Dental Corps by the Alumnae on June 3 at Convocation Hall, University of Toronto.

Mrs. Eddis Greenwood, as one of the captains of the Red Cross Tag Day, reminded the members of the many taggers that were needed to help on May 23.

Miss Margaret Robinson and Miss Mary Hopkins were in charge of the musical. Refreshments were served by the members of the executive with honorary members, Miss Pearl Bartindale and Miss Gertrude Whitehead, pouring tea.

OLGA GREENWOOD, *Publicity Convener*.

Dental Nurses' and Assistants' Association

BRANTFORD DISTRICT CHAPTER: The April meeting of the Brantford District Chapter took place on April 14 at the home of Miss Jean Taylor, Paris.

The President, Alta Simon, presided over the business session and gave a report of the executive meeting held in Toronto on April 11. The members decided to hold an afternoon tea, and a committee of three was ap-

pointed to take charge of arrangements. The proceeds will be used for patriotic purposes.

An interesting contest followed the meeting with Irene Douglas taking top honors.

ARIEL RILEY, *Secretary*.

ESSEX AND KENT COUNTY CHAPTER: The Essex and Kent County Chapter's monthly meeting was held on May 4 in the Canada Building with Janet Hamel Gunn presiding.

Convention plans were foremost on the program of the meeting. Winifred Grier was named chairman of our annual banquet, which will take place on June 1. A report of the successful contribution tea held at the home of Ferna Cook on May 3 was given.

After the business session, the following officers were elected for the coming year: President, Winifred Grier; Vice-president, Barbara Wood; Secretary, Dorothy Bailey; and Treasurer, June Slattery.

WINIFRED GRIER, *Secretary*.

HAMILTON CHAPTER: Dr. L. J. Easter, of Dundas, was the guest speaker at the dinner meeting of the Hamilton Chapter held in the Wentworth Arms Hotel on May 6.

Dr. R. G. Hyde, of Hagersville, introduced Dr. Easter, who spoke on the subject of "Children's Dentistry" and illustrated his interesting and educational talk with models and x-rays.

During the business meeting the following officers were elected for the ensuing year: President, Jean Dalglish; Vice-president, Lucille Church Ryder; Corresponding Secretary, Gertrude Kidner; Recording Secretary, Catherine Sheppard, and Treasurer Margaret Dickson.

GERTRUDE KIDNER, *Secretary*.

KITCHENER DISTRICT CHAPTER: Yvonne Jacques, President, presided at the May dinner meeting held at the Maple Club.

Tickets for a radio raffle were distributed among the members; the drawing will take place at the annual picnic on June 17. Final arrangements were made for the clinic which will be presented by Anne Kirkland at the convention.

The newly-elected executive is as follows: President, Yvonne Jacques; Vice-president, Anne Kirkland; Secretary, Larry Ohlheiser; and Treasurer Ann Smuck. Ruth Janke was

appointed to serve as War Convener and Ruth Meek, as Membership and Program Convener.

RUTH CLARK MEEK, *Secretary*.

OTTAWA CHAPTER: The April meeting of the Ottawa Chapter took the form of a supper meeting at the Orange Lantern on the ninth. The President, Lois McCaughney, presided.

Following the reading of the minutes, the roll call was taken; twenty-one girls responded. The Secretary read a letter from Tomye Turner, Provincial President. Miss McCaughy asked the conveners of the different committees to give their reports to date. Evadna Whitman, Membership Convener, reported that every dental nurse and assistant in the city had been contacted by phone and card. The Secretary was asked to write a letter of thanks for the lovely spring flowers which were sent to the meeting by Ontario Denco Limited.

Our speaker for the evening, Leta Harper, chose "collections" as the subject of her talk.

Before the meeting adjourned, plans for the next meeting were made. It was decided to ask Dr. S. G. McCaughy to be our guest speaker.

OLIVE CUMMING, *Secretary*.

SARNIA DISTRICT CHAPTER: The members of the Sarnia Chapter held their May meeting in the office of Dr. W. A. Hartley.

In the absence of the President, the Vice-president, Aileen Palmer, took the chair. The minutes of the last provincial executive meeting in Toronto were read by Marjorie Crees, and a general discussion on the forthcoming convention constituted the remaining business of the meeting.

HELEN WYNNE, *Secretary*.

FERNA L. COOK, *Publicity Convener*.

Members of the 1942 Class in Dental Nursing

Misses J. E. Bryson, B. Hudson, N. Hunt, D. A. Leyland, M. F. McAllister, E. C. Mills, D. M. Moore and M. I. Skinner, all of Toronto, Miss E. M. Briden, Dobie, Ont.; Miss W. F. Cherriere, Collingwood; Miss J. I. Erskine, Lambeth; Miss M. H. Fleming, Ardbeg; Miss J. C. Kohler, Brampton; Miss E. M. McAuliffe, London; Miss N. K. Peck, Brampton; Miss H. R. Piers, Westboro'; Miss G. F. Putman, Welland; Miss G. M. Muzyka, Vegreville, Alta., and Misses B. E. Emory and E. E. Steed of Nelson, B.C.

MANITOBA:

Dental Nurses and Assistants

Miss Jean Gordon was re-elected President of the Winnipeg Dental Nurses' and Assistants' Association, at the meeting held in the St. Regis Hotel on May 4. Other officers elected are: Vice-president, Miss Jennie Kunynski; Secretary, Miss Jeul Grose; Corres. Sec'y, Miss Christine MacLean, Treasurer, Miss Hazel Wylie; Program Convener, Miss Lew Eyre; Sick and Visiting, Miss Margaret Gilbert; Editorial Sec'y, Miss Marie Waslo; Membership, Miss Helen Sharek; Social Convener, Miss Ann Thompson.

The annual reports were read and approved.

An installation service was conducted by Miss Lavinia Veal with Miss Margaret Gilbert assisting.

Money from the penny box was used to buy flowers for the soldiers at Deer Lodge Hospital.

EMPIRE NEWS

GREAT BRITAIN:

American Surgeons and the R.C.S.Eng.

The good relations which have always existed between the British and American surgeons has been again exemplified by the practical sympathy shown in the recent gift of £2,000 from the American College of Surgeons to the R.C.S. England, towards the repair of the damage done to the Museum by air raids. The Council of the College has been deeply touched by this spontaneous manifestation of sympathy and help. Offers of help have also come from

many directions and many countries and in due course it is hoped that the famous Museum will worthily represent British surgery and again attract students from all parts of the world.—
Dental Record, March, 1942.

AUSTRALIA:

Ivory Cross Dental Aid Fund

The members of the Australian Dental Association have subscribed £410 to the British Ivory Cross Dental Fund to be used to pro-

vide dental treatment for the dependents of men in the services. After deducting exchange, etc., £326 sterling was remitted to the Treasurer of the Ivory Cross Fund.—*D. Jour. of Australia, Feb. 2, 1942.*

Sales Tax on Dentures

A dentist whose total charges for dentures, including services connected therewith, exceeded an average annual amount of £2,800, is required to register and pay Sales Tax as from the 1st December, 1941.

"Services connected therewith" consist of extractions preliminary to denture construction, treating gums, and any adjustments after the supply of the denture to the patient.

"The average annual amount of £2,800" is determined on the basis of business conducted during five years ended June 30, 1941, or from date of commencement of practice until June 30, 1941.

For the purpose of interpreting the Act, "manufacture" of a denture is regarded as

being 25% of the charge made for the denture, including "services connected therewith."

For example: A dentist who is compelled to register on the £2,800 basis will pay 5% Sales Tax on £700 if he maintains his past average annual total charges for dentures.—*D. Jour. of Australia, Feb. 2, 1942.*

Gasoline Rationing

The Australian Dental Association was asked by the Victorian Branch to take steps to arrange that dental practitioners be placed under the "Business and Private Purposes" Class. The efforts of the Association proved successful, and all dentists now receive the extra ration for professional purposes. Some country members with branch practices have also been successfully helped by the obtaining of additional supplies to permit of them attending country towns not served by a resident practitioner.—*Aust. Journal of D., Dec., 1941.*

GENERAL NEWS

C.D.A. Delegate's Meeting

The Board of Delegates of the Canadian Dental Association met in Toronto, May 14-19. Many important matters pertaining to the practice of dentistry in Canada were fully discussed. The question of Health Insurance was given first place in the deliberations and the members unanimously agreed upon a series of principles and a plan of procedure. These conclusions are being presented to the various Dental Boards of Canada for consideration and at a later date will appear in this publication. Committee reports will also be published.

The following officers were elected: President, A. L. Walsh, Montreal; Immediate Past President, W. W. Woodbury, Halifax; President-elect, R. A. Rooney, Edmonton; Secretreas., J. S. Bagnall, Halifax, (pro tem). The following Committee Chairmen were also appointed: Legislation, S. W. Bradley, Ottawa; Dental Health Education, A. E. Higgins, Toronto; Research, Roy G. Ellis, Toronto; Dental Education, A. L. Walsh, (pro tem.); Public Relations, J. S. Lapp, Toronto; Canadian

Dental Corps, A. L. Walsh, (pro tem.); Indian Affairs, H. J. Merkeley, Winnipeg; Necrology, Secretary; Ethics, D. W. Gullett, Toronto; Nomenclature, John W. Gerrie, Montreal; Finance, to be appointed; Journal, G. Vernon Fisk, Toronto; Federal Health Insurance, D. W. Gullett.

Changes in Editorial Staff of the Journal

Dr. T. R. Marshall, of Toronto, who has served his province so faithfully as Associate Editor of the Journal since the inception of this publication eight years ago, has been made Assistant Editor. These duties will be in addition to his provincial responsibilities.

Dr. H. M. Cline, of Vancouver, has been appointed Associate Editor for British Columbia to replace Dr. J. S. Bricker who has also served his province in this capacity most faithfully for the past eight years.

A.D.A. Convention

The American Dental Association's 84th annual meeting in Boston, August 24-28,

comes under the wartime slogan: "Do First Things First." All sessions, scientific sections, and exhibits, will emphasize the active role of the dentist in helping to win the war.

Section officers and general arrangements chairmen are shaping all phases of the meeting to contribute to the general tenor of "service in wartime."

The Boston convention, the first wartime A. D. A. meeting, is particularly significant, because Boston has been termed "The Birthplace of American Liberty."

Send reservations immediately to Dr. M. E. Peters, Chairman Housing Committee, Room 554, Statler Hotel, Boston, Mass.

Notice to Investigators in Field of Periodontia

The Periodontia Department of New York University College of Dentistry cordially invites each investigator in the field of periodontal disease who has published a paper or papers containing the results of either laboratory research or clinical observations which bear directly or indirectly upon the aetiology or treatment of periodontal disease in man or animals (1) to submit a concise summary of those of his papers which he deems to be his basic contributions to this field and which he considers to be in agreement with his present thinking, or with his experience and thinking up to a time specified by him; and (2) to cite the location and time of appearance of such paper or papers which contain such basic findings; also (3) to enclose any additional statement that may seem necessary to him to amend the foregoing statements so that they more accurately reflect his present opinions.

These summaries will, therefore, contain only present opinions, rather than the total results of each worker's endeavours which may, in addition, include errors, duplications, altering viewpoints, etc. The compilations of such summaries which will *contain the essence of each investigator's present thinking will then be published in book form* and will, therefore, not be a series of abstracts of papers on either the aetiology or treatment of periodontal disease.

The summary should be in our hands not later than July 1, 1942.

—209 East 23 Street, New York, N.Y.

Special Instruction for Dentists

On the completion of a six-weeks' course of intensive training, eighteen dentists of Pasadena received certificates as volunteer bacteriologists, of the laboratory division of the health committee in the Civilian Defense Council. The course was given under the direction of a city health officer, and these dentists are now qualified to augment the regular health department staff in the event of an emergency. Class members were instructed particularly with reference to making water tests.—*Pasadena (California) Star-News*; per *Oral Hygiene*, April, 1942.

Army Requires 5,309 Dentists this Year

According to Col. George F. Lull, chief of the personnel division of the United States Army Medical Corps, the army will require 5,309 men in the dental corps; 23,658 in the medical corps, and 2,310 in the medical administration corps. Col. Lull also stated that at the present time there are in the service 3,309 dentists, 11,790 physicians, 731 veterinarians and 1,478 medical administrators.—*North-West Dentistry*, April, 1942.

Oslo Meals "Keep 'Em Working"

The Council on Foods and Nutrition, of the American Medical Association, gave a report at a recent meeting called by the Association's Council on Industrial Health in Chicago on the dietary needs of defense workers. The group had already been told by Northwestern University's Professor of Physiology, Dr. Andrew Conway Ivy, that long hours of work without rest would not speed up production but would lead to fatigue, sickness and absenteeism. Dr. Ivy pointed out that in order to work hard and effectively, a man required rest, *good food*, and wholesome recreation.

In the interests of production, as well as of human welfare, the managers of industry are vitally concerned with the health of their workers. The Council on Foods and Nutrition recommended that meals in plant cafeterias should be planned by trained dietitians, and that additional mid-morning and afternoon lunches should be served to workers who need extra energy. Especially recommended as a pick-up of this kind was the famous "Oslo Meal".

In the original Norwegian experiments with this meal, uncommonly rich in vitamins, and extraordinarily easy to prepare, it was reported that school boys who ate the meal once a day gained 48 per cent more in weight than boys on the standard hot luncheon, and that the girls gained 140 per cent more in weight. The schools of London later corroborated these reports, and the "Oslo Meal" is now being used in British factories as a war measure.

Served entirely cold, the meal consists of about one-third quart of whole milk; an unlimited amount of wholemeal bread (or Kneipper-cracker) with fortified margarine and Caerphilly cheese, or goats' milk cheese; half an orange; half an apple; and a raw carrot. —*Ill. Health Messenger*, Feb. 15, 1942, V. 14, No. 4, per A.D.A. Release.

Council on Dental Education

A national conference of college and university presidents held at Baltimore, Maryland, on January 3-4, 1942, to consider the effect of the war upon higher and professional education, unanimously adopted a resolution recommending that so far as possible, without

loss of standards, college and professional schools employ the summer months so as to enable students enrolled in courses covering four academic years to graduate in three calendar years.

Thirty-five of the thirty-nine schools in the United States will adopt accelerated schedules for the duration of the war. The majority of the schools will admit their first new class under the accelerated schedule in July.

The Wartime Commission of the Office of Education at Washington is preparing an estimate of the possible added burdens which accelerated schedules will put upon both institutions and students with the expectation that Federal aid may be secured for these purposes.

Returns from more than twenty-five schools, a fair cross-section of the entire number, indicate that 72% of the dental students work during the summer months or during the academic year to help meet their college expenses. They earn on the average \$343.00 per year. About 75% of the amount is earned during the summer months and the balance during the academic year. This means that such students earn more than \$2,000,000.00 annually—A.D.A. Release.

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

Rev. W. E. Cummer, of Toronto, Ontario, aged 62, died May 14. He was graduated from the Royal College of Dental Surgeons of Ontario in 1902. In 1905 he became a demonstrator in this school and in 1907 was raised to the rank of professor which title he retained with increasing responsibility until 1931 when he resigned to become Dean of the School of Dentistry, University of Detroit. He retained this latter distinction until 1933 when he resigned to enter St. Basil's Novitiate to prepare for the priesthood in the Roman Catholic Church.

As a teacher and writer in dental prosthesis Fr. Cummer was known throughout

the world. He served in the Canadian Army Dental Corps during the First World War. He received the degree of F.A.C.D. in 1927. He was associate editor of many publications including the "Apollonian," of Boston. He gave 130 lecture demonstrations in the United States, Canada and Europe. He wrote a number of articles for the Canadian Dental Research Foundation and prepared material for a number of prosthetic text books.

Father Cummer had a great love for music. As a chorister he had sung in many prominent choirs and later in St. Basil's Catholic Church. He was a very accomplished organist as well as a vocalist.

Peter Davidson MacSween, of New Westminster, B.C., aged 63, died suddenly from the result of a heart attack on April 25.

Dr. MacSween was born in Ontario but at the age of five moved to British Columbia where he has remained ever since; first practising dentistry in Chilliwack for three years, and in 1912 opening an office in New Westminster where he resided until the time of his death. He was a Past President of the B.C. Dental Association.

He took a keen interest in hunting and fishing, and was a member of the Game Board. He also served on the School Board and was director of the Royal Columbian Hospital. Fraternally he was a member of Union Lodge, A.F. and A.M., and a Past Grand Master of the Masonic Order.

Dr. MacSween is survived by his widow, one son, four daughters, three sisters and six grandchildren.

Capt. W. Oswald Vrooman, of Kingston, Ontario, aged 43, who was serving overseas with the Canadian Dental Corps, died suddenly somewhere in England. Mrs. Vrooman was advised Wednesday, April 29, 1942, that her husband had died from coronary thrombosis.

Captain Vrooman was born near the Village of Odessa. He was educated in the public and high schools at Odessa and later was graduated from the Royal College of Dental Surgeons in 1923. He immediately started to practice in Kingston, continuing until his enlistment in the Canadian Dental Corps.

At the age of sixteen years, he enlisted in the Canadian Expeditionary Force in the First Great War and served for a period of four years. He took an active part in the municipal affairs and was elected to the Kingston City Council in December, 1936, and served on that body for three years. He was chairman of the Parks Committee in 1938 and 1939.

Captain Vrooman was interested in sports. He was a Past Master of Ancient St. John No. 3, A.F. and A.M., at Kingston and also a member of the Scottish Rite. He belonged to the Order of Oddfellows, the Orange Order, and was a Woodman of

the World. He was a Past President of the Kingston and District Dental Society.

He is survived by his widow and one daughter.

Leonard Laughlin Follick, of St. Mary's, Ontario, died on Thursday, April 16. He was in his 75th year. He was graduated from the Royal College of Dental Surgeons of Ontario in 1899.

Dr. Follick was born near Exeter; received his early education in Clinton, Ontario, and after graduating in dentistry he practised continuously in St. Mary's for 42 years. For some time he was connected with the school dental clinic of the town. For some 18 years he served as a member of the Collegiate Institute Board. He was a member of the United Church.

He is survived by his widow, one son, Dr. Frederick Rea Follick, who has been associated with his father in practice, three daughters, a brother and two sisters.

Samuel William Dick Frith, of Edmonton, Alberta, aged 76, died May 6. He had practised in Winchester, Ontario, and Calgary, Alberta, before moving to Edmonton in 1921.

He was a member of the Guernsey Club as provincial western representative on the board. He was a prominent member of the First Baptist Church.

Dr. Frith is survived by his widow, one son and three daughters.

Charles S. Agnew, of Antigonish, N.S., aged 75, died April 29, after a long period of poor health. He was born in Centreville, N.B. After graduating from college he practised his profession in Fredericton for a year and a half, and in Antigonish for over fifty years.

He was an enthusiastic curler and golfer.

Dr. Agnew is survived by one brother.

Mrs. Weston A. Price, of Cleveland, Ohio, died April 25. The members of the Canadian Dental Association extend their deepest sympathy to Dr. Price in this the hour of his great bereavement.

... SECTION FRANÇAISE ...

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Assistant

Armand Fortier, D.D.S.

REDACTEUR

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516 est, rue Sherbrooke, Montréal, Québec

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La Nutrition au Point de Vue Médical

par le docteur J. E. SYLVESTRE

Directeur de la division de l'Hygiène et de la Nutrition, Ministère de la Santé, Québec.

Depuis une dizaine d'années, il est bien peu de sujets scientifiques, si toutefois il en est, dont les problèmes aient été étudiés par un plus grand nombre de savants à la fois, et sur lesquels autant d'autorités aient écrit plus d'articles et de rapports, que celui de la Nutrition?

L'application des principes de cette science à la vie courante a donné, dès les débuts même, des résultats si encourageants que le monde médical s'est tourné presque en masse vers cette science qui s'avérait comme source si prometteuse de santé et de bien-être.

Cette espérance n'a pas été déçue bien au contraire, car depuis le temps des hypothèses, et des possibilités, des théories nombreuses et précises ont été énoncées à la satisfaction du monde savant et l'efficacité des règles qui découlent de ces principes a permis l'accumulation de preuves si évidentes que le peuple même porte à cette science un intérêt de plus en plus vif, à tel point que déjà une partie de la population est devenue soucieuse d'en suivre les enseignements.

En face d'un mouvement qui tend à se généraliser davantage de jour en jour, il semble rationnel que le médecin ait dans son bagage de science, pour en faire bénéficier les êtres humains qu'il a le devoir d'aider, autant de connaissances sur la Nutrition qu'en ont les vétérinaires et les agronomes qui n'ont à s'occuper après tout que des animaux et des plantes.

Qu'est-ce donc que la Nutrition?

La Nutrition, d'après Sherman, peut être définie comme suit: l'ensemble des pro-

cessus qui concourent à la croissance et au maintien ou à la réparation du corps vivant pris dans son entier, ou de chacune de ses parties constituantes. Partant de cette définition, il faut admettre que la Nutrition est un facteur de santé. En effet, il est évident que l'individu chez qui ces processus sont entravés de quelque façon, ne pouvant plus maintenir l'intégrité de sa substance, ni réparer les pertes subies par suite des activités cellulaires, principes de vie et de mouvement, se voit bientôt en état de déchéance physique, localisée d'abord, mais bientôt généralisée; car cette déchéance d'une partie quelconque de son être diminue peu à peu son efficacité fonctionnelle et ce désordre finit toujours par compromettre l'équilibre fonctionnel de l'organisme tout entier.

Toutefois, il n'y a pas que les capacités fonctionnelles de l'organisme qui soient en cause dans ces phénomènes de la Nutrition. En effet, même si l'organisme est en état d'accomplir à la perfection ces processus vitaux, il n'aura plein succès qu'à la condition expresse de recevoir, de l'extérieur, les matières premières dont est composé l'être humain tout entier, le combustible qu'il consume et toutes les substances dont il a besoin pour tirer profit des éléments reçus. L'organisme humain, ne peut pas créer, mais tout au plus utiliser ou transformer pour son bien propre, les matériaux qu'il reçoit. C'est pourquoi, en vue d'assurer l'intégrité de la matière et l'harmonie fonctionnelle des organes, il faut alimenter convenablement l'être humain.

A cette seule fin de protéger la santé et de favoriser la croissance, l'application des principes de la Nutrition est aussi bien l'affaire du médecin de famille que celle du médecin hygiéniste. Tous deux sont médecins et le principal devoir qui incombe à l'un comme à l'autre à titre de médecin, c'est la sauvegarde de la santé. Lors même que les médecins hygiénistes augmenteraient en nombre et couvriraient toutes les agglomérations, lors même que ces médecins consacrent et devront toujours consacrer leur temps et leurs énergies à l'éducation du peuple en matière d'hygiène; leur champ d'action restera toujours trop vaste et la tâche toujours trop lourde pour que le médecin de famille soit jamais dégagé de cette responsabilité qu'il accepte, en devenant le médecin de famille. D'ailleurs, il devient chaque jour plus évident que la médecine préventive occupera bientôt une large place dans la pratique courante de ce dernier. Déjà le public s'émue à la vue des faits soulignés par les hygiénistes et nombre d'individus commencent à réaliser qu'en effet il vaut mieux prévenir que guérir. Il n'est plus très éloigné le temps où le médecin de famille verra chez lui plus d'individus bien portants, désireux de rester en santé, qu'il n'en voit actuellement chez eux, malades ou moribonds. Tout de même, il n'y a pas et jamais il n'y aura que des gens à maintenir en santé. C'est par-là que le rôle du médecin de famille diffère et différera toujours de celui du médecin hygiéniste: Soigner des malades et les ramener à la santé.

Que l'individu soit sain ou qu'il soit malade, la composition de son être et le fonctionnement de ses organes doivent toujours tendre vers l'idéal établi par le Créateur. En conséquence, les principes de la Nutrition ne doivent pas être considérés comme mesures purement préventives, applicables seulement au maintien de la santé, mais on doit aussi en tenir compte, dans la maladie, comme aide et support au traitement médical proprement dit, bien plus l'observation minutieuse de ces principes constitue souvent l'unique traitement rationnel.

Tout médecin, qu'il soit le médecin de famille, le spécialiste ou même le médecin rencontré d'occasion, doit s'intéresser à l'état de Nutrition des individus qui le consultent ou qu'il traite. Il arrive si souvent que les troubles et les ennuis qu'accusent les patients ne soient pas autre chose que des troubles de la Nutrition, ou n'ont pas d'autres causes que des erreurs d'alimentation. La plupart des troubles du tube digestif ne sont-ils pas dus à des habitudes alimentaires défectueuses: irrégularité dans l'horaire des repas, mastication insuffisante, repas trop copieux, aliments trop gras, etc.

Parmi les hépatiques et les rénaux que vous rencontrez chaque jour, avez-vous jamais eu la fantaisie de calculer le nombre de ces patients dont les troubles et les malaises

sont la conséquence directe d'une alimentation mal balancée, faute d'avoir su tenir compte des proportions désirables entre les glucides, les lipides et les protides qui doivent constituer une alimentation normale. Enfin, n'arrive-t-il pas très souvent qu'on soit joliment embarrassé en présence de certaines personnes qui se présentent à la consultation, accusant des maux plus ou moins sérieux, mais dont la cause nous échappe de prime abord, parce qu'il est impossible de déceler une lésion organique ou de reconnaître des signes fonctionnels bien définis; ce n'est qu'après avoir questionné sérieusement le ou la plaignant sur son alimentation que l'on finit par découvrir que ces ennuis n'ont pas d'autre raison qu'une insuffisance parfois légère mais habituelle de certaines substances essentielles au maintien de la santé et de la vigueur.

Il importe donc de penser aux habitudes alimentaires dans nombre de cas et parfois même il faut pousser l'examen du patient jusqu'à l'étude approfondie de l'accomplissement de ses fonctions de Nutrition; car, il peut arriver que, même avec une alimentation adéquate à tout point de vue, l'individu soit vraiment mal nourri et présente des signes marqués de carence en certaines substances indispensables. En effet, il peut y avoir, le long du tube digestif, des causes qui empêchent l'absorption de ces substances au niveau de l'intestin, ou dans l'organisme, des raisons qui en limitent l'utilisation ou précipitent leur élimination.

Dans tous ces cas mentionnés, et combien d'autres, tels que le goître simple et l'anémie, pour ne mentionner que ceux-là, le traitement principal et rationnel, pour ne pas dire l'unique traitement susceptible de produire des résultats et de ramener ces malades à la santé, c'est un régime alimentaire approprié, comprenant un ensemble d'aliments capables, grâce aux substances essentielles qu'ils contiennent, de satisfaire tous les besoins physiologiques de l'organisme, et surtout de combler les déficits responsables de l'état actuel.

Je conviens, qu'il n'en est pas toujours ainsi, mais quelle que soit la maladie, aiguë ou chronique, il faut tout de même tenir compte des besoins physiologiques de l'organisme et les satisfaire pleinement, si on veut donner au malade, toutes ses chances possibles de guérison et y arriver plus rapidement.

A cause de certaines conditions propres à chaque malade, la quantité nécessaire de certains éléments nutritifs peut varier, ainsi que la forme et le mode d'introduction, mais ces détails ne changent rien au principe lui-même, à savoir: que le malade requiert généralement, les mêmes substances, que le sujet sain.

L'activité cellulaire, source de vie et de mouvement, ne peut pas s'effectuer sans combustion, les fébricitants dépensent souvent même plus de calories qu'ils n'en ont besoin en santé, pour vaquer à leurs occupations ordinaires. Il faut trouver un moyen de fournir au malade tout le combustible nécessaire, si on ne veut pas que, dans sa lutte pour la vie, après avoir épuisé complètement ses réserves de tissus adipeux (si toutefois il en dispose) il brûle, comme dernières munitions ses propres tissus musculaires, ce qui aurait pour effet de prolonger inutilement la durée de sa convalescence.

En outre de cette dépense de combustible, l'activité cellulaire, qui se continue dans tous les domaines, produit une certaine usure qu'il faut réparer et entraîne la perte de substances qu'il faut combler par l'administration de protéines et de sels minéraux, dont les plus importants sont: le calcium, le fer et l'iode.

Tout malade doit donc recevoir sous une forme quelconque, un ensemble d'acides aminés nécessaires à la formation de cellules nouvelles. La présence d'albumine dans les urines n'est pas une raison pour supprimer de l'alimentation toute substance azotée, au contraire, il faut en donner davantage afin de compenser les pertes plus grandes dans ces cas; tout de même, il importe alors de faire un choix judicieux des sources de protéines.

Quant au calcium, au fer et à l'iode, on tiendra compte non seulement des

besoins ordinaires de l'individu, mais aussi des indications particulières que suggère son état actuel de réceptivité, de déficience et d'élimination.

Il n'est pas rare de rencontrer, dans les consultations ou parmi les malades, des troubles fonctionnels régularisés normalement par les Vitamines. Il faut donc se rappeler que l'ensemble des Vitamines est indispensable à la croissance, au maintien de la santé et de la vigueur. Chacune d'elles peut contrôler une foule de manifestations désastreuses dont l'explication se résume presque toujours à une action particulière, presque spécifique à telle vitamine.

Il serait long de discuter l'application de ce principe à chacune des Vitamines connues à date; voyons donc seulement quelques détails intéressants sur la Vitamine "A".

La Vitamine "A", qu'on appelle plus ou moins à tort facteur anti-infectieux, exerce une action bienfaisante sur les épithéliums; la peau et les muqueuses. L'insuffisance, à plus forte raison l'absence de cette vitamine dans l'organisme cause un changement marqué, dans la structure normale de ces tissus, changement qui les rend plus aptes à s'affruter, créant ainsi des voies plus faciles à l'invasion microbienne.

Les conséquences de cette métaplasie, s'il est permis d'employer ce mot, peuvent se retrouver en tout endroit de l'organisme où les couches profondes de tissus sont protégées normalement par une surface épithéliale. Toutefois, les voies respiratoires supérieures étant plus exposées aux assauts répétés et massifs des agents extérieurs, microbes et conditions atmosphériques, ce sont elles qui souffrent plus fréquemment des moindres transformations produites dans ses muqueuses par suite d'une insuffisance de Vitamine "A". Ce mode d'action clairement expliqué par Walter Eddy dans son traité "What are the Vitamins?", fait bien comprendre que ce facteur vitaminique n'immunise pas contre les infections, mais simplement aide l'organisme à conserver intactes ses premières lignes de défense ou même à les refaire au cours des attaques de l'ennemi.

D'autres régions peuvent aussi subir un affaiblissement qui les expose davantage à céder sous la pression envahissante des microbes. La bouche et les oreilles, particulièrement la base de la langue et l'oreille moyenne, le tube digestif, quoique exceptionnellement, le canal urinaire et les cavités génitales, la peau et la conjonctive de l'oeil, de même que l'émail des dents.

J'ai mentionné le tube digestif; la muqueuse qui le tapisse est rarement atteinte de métaplasie. C'est heureux, car, dans ce cas, l'absorption de la Vitamine "A" pourrait bien être considérablement diminuée et de ce fait tous les épithéliums seraient voués à une déchéance certaine et désastreuse. D'ailleurs, il n'y a pas que la Vitamine "A" dont l'absorption puisse être limitée au niveau de l'intestin, et ce n'est pas toujours dû à des lésions intestinales. Ainsi par exemple, la Vitamine "A", étant soluble dans les huiles minérales, comme dans les huiles végétales d'ailleurs, ne sera pas plus absorbée que l'huile minérale elle-même si la vitamine vient en contact avec celle-ci. Quand un traitement à l'huile minérale est conseillé il faut donc tenir compte de cette particularité et prescrire un régime alimentaire où ce facteur soit présent sous forme de Carotène plutôt que sous forme de Vitamine "A" car le premier n'étant pas aussi soluble dans les huiles minérales, l'absorption en est moins affectée par leur présence dans l'intestin.

Voyons rapidement les préférences des autres vitamines.

La Complexe Vitaminique "B" joue un rôle important dans l'utilisation complète des hydrates de carbone prévenant ainsi toutes les conséquences d'une intoxication par l'acide pyruvique, stade intermédiaire dans l'oxydation de ces substances, conséquences qui se manifestent généralement par des troubles du système nerveux.

La Vitamine "C", par son action sur les tissus intercellulaires, concourt à maintenir la circulation régulière et normale dans toutes les parties du corps.

La Vitamine "D" préside au métabolisme des sels de chaux et de phosphore, elle

est donc indispensable à la formation des os et des dents, ainsi qu'à leur conservation en bon état de résistance.

La Vitamine "E", indispensable au fonctionnement normal des organes de reproduction chez le rat, joue sans doute, un rôle à peu près semblable chez l'être humain.

La Vitamine "K" en favorisant la production de prothrombine, ramène le temps de coagulation normale chez les individus plus ou moins hémophiliques.

Vu l'importance que jouent toutes ces substances dans l'organisme humain, ce n'est pas au cours d'une maladie qu'on a le droit de s'en désintéresser, au contraire. Cependant, le problème est souvent fort compliqué, et sa solution exige une attention soutenue et parfois même, des examens spéciaux.

Il y a quelque temps, le Dr. F. F. Tisdall, une autorité en matière de Nutrition, disait, en parlant des individus en santé, que l'alimentation n'est pas une affaire de pilules. Il a bien raison, n'est-ce pas? Dans l'ordre normal des choses, l'homme trouve toutes les substances dont il a besoin, dans les aliments qu'il emprunte au règne végétal ou au règne animal; cependant, surtout chez les malades, quand on ne peut faire autrement, il vaut encore mieux recourir aux produits pharmaceutiques, plutôt que de laisser un individu en déficit grave.

Le médecin traitant, doit donc, étudier le fonctionnement de tous les organes de son malade, afin d'en connaître les susceptibilités. A l'aide de ces connaissances totales, il pourra diriger cette partie du traitement, qu'on appelle la diète, et répondre aux exigences de son malade. En effet, le médecin ne doit pas l'oublier, il lui faut tenir compte des exigences particulières de ses malades.

Par exemple, il arrive assez souvent que des enfants soient atteints de maladies chroniques, telles que Diabète, Néphrite, Tuberculose, etc., ou même de maladies aiguës à cycle assez long. Quand il s'agit d'enfants il faut se rappeler qu'ils ont besoin de tous les matériaux de construction, sans en excepter un seul, y compris toutes les Vitamines qui sont indispensables à l'utilisation de ces matériaux. Bien plus, il ne faut pas se contenter de leur fournir les quantités désirables, mais des doses optima, car ça n'est pas une raison, parce qu'un enfant est momentanément malade, pour qu'il ait sa croissance et son développement compromis au point que son état physique soit marqué d'infériorité pour le reste de ses jours; du moins, chaque fois qu'il est physiquement possible d'éviter un tel désastre.

Les femmes enceintes devraient toutes requérir les soins d'un médecin. Celles qui lui font cette confiance méritent bien qu'il s'occupe d'elles, et leur rende tous les services, qu'il est apte à rendre. L'alimentation est un facteur des plus importants durant la grossesse, pour l'enfant et pour la mère, il faut donc que le médecin sache diriger sagement le régime alimentaire de ces clientes.

Dans l'application des principes de Nutrition, le médecin doit aussi tenir compte des conditions de fortune de l'individu, afin de ne pas recommander un régime alimentaire, ou des substituts qui soient trop dispendieux pour ses moyens. Le médecin doit consulter les goûts de son patient, afin d'y conformer autant que possible, ses ordonnances. Il est toujours préférable d'écrire un régime alimentaire au malade afin qu'il n'oublie pas les recommandations données. Dans la rédaction d'une diète, il ne faut pas oublier que la Nutrition, étant une science positive, ce sont les aliments permis qu'il convient de noter; d'autant plus qu'une permission est toujours plus agréable et généralement mieux observée qu'une défense, si bien comprise qu'elle soit.

D'ailleurs, le but principal de la diététique n'est-il pas de fournir à l'organisme d'un individu anormal, les éléments dont il a besoin, sous une forme qui convient à son état actuel. C'est pour atteindre ce but qu'il faut spécifier, les aliments qui doivent être consommés.

Il est aussi d'excellente politique de faire comprendre au malade, pourquoi ces aliments lui sont recommandés, plutôt que d'autres plus à son goût peut-être.

Dans les hopitaux bien organisés, le médecin voit sa tâche rendue facile par les services réguliers de diététiciennes compétentes. Quand il a posé son diagnostic complet, et noté les susceptibilités organiques de son malade, son rôle est accompli, la diététiste fera le reste selon l'art, et sur elle retombera toute la responsabilité du traitement diététique. Mais tel n'est pas le cas pour les malades extérieurs; cette partie du traitement devient plus onéreuse et souvent compliquée. Cependant, le médecin, soucieux du bien-être de son patient, ne reculera pas devant la tâche, car sa conscience lui fait un devoir de ne négliger aucune mesure susceptible de produire ou même simplement d'aider la guérison de son malade. Le médecin lui-même y trouve aussi généralement son bénéfice car, il n'est pas rare de rencontrer, de nos jours, des médecins qui ont acquis une renommée solide et méritée, à la suite de succès nombreux obtenus par l'application des principes de Nutrition, dans les cas jugés opportuns.

Discussion sur le Traitement des Canaux

(Suite)

Par le Dr Maurice Roy

Professeur à l'Ecole Dentaire de Paris

Messieurs, je suis très heureux qu'on ait porté cette question à l'ordre du jour, car c'est certainement une des choses les plus importantes et les plus délicates de notre technique et il est très utile de confronter les idées des différents auteurs au sujet de cette question.

J'ai été particulièrement heureux d'entendre tout à l'heure l'exposé fait par Bernard et j'y ai retrouvé avec plaisir une grande partie des données générales que j'ai exposées depuis fort longtemps; ce n'est pas pour revendiquer une priorité en aucune manière, mais seulement pour constater une communauté de vues qui me fait grand plaisir parce qu'elle établit des points fondamentaux qu'on perd malheureusement trop souvent de vue. Pour ma part, j'ai toujours défendu cette notion, capitale à mon sens (vous pouvez vous reporter à mes travaux) à savoir qu'il y a deux choses indispensables dans le traitement des canaux: d'une part, une action mécanique, d'autre part une action médicamenteuse, mais l'action mécanique aussi bien que l'action médicamenteuse ne doivent pas s'employer à l'exclusion ni de l'une ni de l'autre; elles forment un tout.

De même, j'ai dit et n'ai cessé de répéter que, lorsqu'on emploie un médicament, il est faux, il est ridicule de dire que c'est au médicament que l'on doit la désinfection d'une dent: c'est à la méthode, à la façon dont on emploie ce médicament; car il y a une question technique qui est capitale et suivant que la technique sera bonne ou mauvaise, le résultat sera bon ou mauvais avec un même agent médicamenteux.

Il y a aussi une question mécanique qui se pose: Bernard a très bien résumé la chose: pénétrer, désinfecter et obturer; c'est en effet là toute la technique; c'est là tout le principe du traitement des dents infectées et si vous ne réalisez pas ces trois objectifs, vous pourrez avoir des résultats qui vous donneront des illusions, mais vous n'obtiendrez pas un résultat convenable.

Au sujet de la partie mécanique du traitement, j'ai déjà dit à maintes et maintes reprises qu'un grand nombre des échecs dans la désinfection des canaux était dû à une mauvaise préparation des dents et à un accès défectueux vers les canaux. Il faut pour pénétrer correctement dans les canaux suivre une technique rationnelle que

j'ai exposée dans un travail sur ce sujet (1), mais cette technique est trop souvent méconnue: je ne m'étendrai pas aujourd'hui sur cette question, car demain matin, je dois faire une démonstration, à l'Ecole Dentaire de Paris, sur la recherche des canaux imperméables et je vous montrerai la technique que j'ai déjà présentée plusieurs fois; elle est simple et permet d'éviter les erreurs et les fautes graves.

D'autre part, la désinfection comporte l'observation d'un point particulier: Nous avons à considérer, d'une part, l'infection du canal et, d'autre part, les altérations péri-apicales; or, ces deux points comportent des indications tout à fait différentes, au point de vue de la désinfection. Le canal lui-même peut être considéré comme une chose morte, c'est-à-dire sans réaction vitale, sur lequel les agents de désinfection agiront de la même manière que sur un tissu poreux quelconque, un tissu même inorganique poreux; ce sont là les conditions du canal radiculaire et il est illusoire de compter, en ce qui concerne celui-ci, sur une réaction vitale quelconque des parois canaliculaires.

Au contraire, sur la région péri-apicale, nous sommes en présence d'un tissu vivant, capable de réactions pathologiques sans doute, mais aussi de réactions curatives. En réalité, en ce qui concerne le périapex, ce n'est pas l'action médicamenteuse qui peut agir en aucune manière sur l'infection périapicale; la seule façon dont on puisse agir sur ces lésions périapicales, c'est de tarir à sa source l'infection qui vient du canal et, lorsque cette source sera tarie, la lésion périapicale se guérira, si les éléments cellulaires de l'individu en cause sont capables de détruire les éléments infectieux; vous savez, en effet, que, dans les tissus organiques, dans les tissus vivants, ce ne sont pas, comme on l'a cru longtemps, les antiseptiques qui détruisent les bactéries, ce sont les réactions vitales, les réactions cellulaires elles-mêmes qui vont détruire ces éléments infectieux; la thérapeutique doit consister à donner le maximum de vitalité, de réaction de défense aux éléments cellulaires du périapex et pas autre chose et surtout à ne pas les altérer; or, on peut très bien annihiler ou troubler ces réactions vitales favorables par certaines médications intempestives.

Ainsi donc, les lésions périapicales sont susceptibles de guérir seules, et en cela je suis d'accord avec Lentulo, lorsque l'infection canaliculaire a disparu; mais, pour obtenir ce résultat, le traitement mécanique suffirait-il à lui seul comme il le pense? Je ne crois pas que ce soit exact; il me paraît nécessaire de faire pénétrer des agents antiseptiques dans ces canalicules dentinaires pour stériliser le tissu même de la dentine; d'autre part, comme on l'a appelé, il y a des canaux accessoires que nous ne pouvons pas atteindre; ces canaux accessoires peuvent être désinfectés par pénétration des substances médicamenteuses par imbibition de ceux-ci par l'application dans les canaux de pansements médicamenteux.

L'obturation des canaux ne saurait, à mon avis, être considérée comme une chose aussi absolue que le voudrait Lentulo: sans doute on peut souhaiter qu'un canal soit complètement obturé, mais, néanmoins, il serait faux de dire d'un canal que, du fait qu'il n'est pas complètement obturé, il est infecté; ce peut être une erreur, car si un canal a été bien désinfecté et même s'il n'est pas obturé jusqu'à l'apex, il peut présenter cependant toutes les garanties possibles de sécurité; la réciproque est également vraie, car on peut avoir des canaux complètement obturés et avoir des réactions pathologiques indéniables au niveau de l'apex de dents semblables.

Comme je viens de le dire, ces canaux accessoires, plus fréquents qu'on le pense souvent, il faut les désinfecter. Mais ce ne peut être par un traitement mécanique, c'est impossible; mais si le canal principal a été largement ouvert, il y a des chances sérieuses, par l'imprégnation médicamenteuse, d'en obtenir la désinfection.

Cette question de désinfection, elle peut être appliquée de diverses manières, que ce soit par des médicaments ou applications médicamenteuses directes, soit par certains

(1) Maurice Roy. — Quelques considérations sur la recherche et la désinfection des canaux radiculaires. *L'Odontologie*, 1932, p. 417.

procédés techniques, par exemple l'ionophorèse, à laquelle pour ma part je tendrais à donner la préférence, parce qu'elle est basée non plus sur le passage simplement d'un courant électrique, dans lequel, je l'avoue, je n'ai pas grande confiance, mais parce que ce traitement se propose, par ce courant électrique, d'introduire dans l'épaisseur des tissus radiculaires des agents médicamenteux, qui rempliront le rôle de désinfection que je considère comme nécessaire.

Cette désinfection obtenue, l'obturation devra être pratiquée; et, à cet égard, malgré les réserves que j'ai formulées il y a un instant, il est évident qu'il faut tendre à la pratiquer d'une façon complète. Sur ce point, il est certain que nous avons réalisé, grâce à notre ami Lentulo, un progrès considérable de notre technique, je suis heureux de le lui dire publiquement; le bourre-pâte de Lentulo est un instrument remarquable, dont le mécanisme est très simple et qui nous donne une précision et une assurance que nous ne pouvons obtenir par aucun autre procédé.

Cette obturation canaliculaire doit être faite par des substances non inertes comme la gutta par exemple; elle doit constituer un pansement permanent fait avec des substances médicamenteuses antiseptiques, mais non irritantes pour le périapex. Dans cette pâte obturatrice, et j'appuie complètement Bernard dans ce qu'il dit à ce sujet, ne mettez pas de formol ou de produits formolés; j'en ai vu de graves inconvénients et, pour ma part, je les proscriis formellement.

Avec la pâte à l'oxyde de zinc, eugénol, aristol, on obtient des résultats très satisfaisants.

En résumé, il faut, à mon avis, concevoir la désinfection des canaux radiculaires en considérant le problème dans son intégrité et ne pas compter sur des méthodes de facilité excessive; je souhaite qu'on y arrive, comme le disait Lentulo, mais nous n'en sommes malheureusement pas encore là et, dans ces conditions, avant d'adopter des méthodes de facilité, je vous dis: "attention" parce que la santé et même quelquefois la vie de vos patients se trouvent en jeu.

II. — ARGUMENTATION DU DR DELATER, professeur à l'Ecole Dentaire de Paris.

Devant cette diversité des méthodes préconisées pour assurer une cicatrisation définitive des tissus mous ulcérés autour d'un apex infecté, nous nous trouvons fatalement enclins à penser qu'aucune, peut-être, n'est capable de la garantir à coup sûr. Quant à une maladie on oppose toute une gamme de médications, c'est qu'aucune n'est absolument bonne.

Longtemps les expérimentateurs se sont efforcés de réaliser—théoriquement—la destruction des microbes par des antiseptiques chimiques. Et voici qu'avec à-propos et une pointe d'humour, notre collègue M. Lentulo nous propose d'obtenir simplement en un temps et avec une pâte quelconque le canal sur toute sa longueur!... Nos idoles s'effritent!

Je crois que les méthodes d'obturation des canaux infectés prennent depuis quelques années une orientation nouvelle:

Sur la foi d'un pouvoir destructeur incontestable des microbes, on a, en effet, pendant longtemps, enfermé une mèche ou une pâte antiseptique dans les profondeurs d'une racine. Qu'a-t-on fait bien souvent? La substance chimique a coagulé les tissus à son contact, supprimant les microbes les plus voisins, mais réalisant une manière de colmatage qui s'oppose à la pénétration vers les tissus plus éloignés et laissant y persister des bactéries, atténuées certes dans leur virulence, mais capables de s'exalter à l'occasion de quelque fléchissement de la résistance organique...; et l'on voit se réveiller une inflammation apicale que l'on croyait éteinte et qui se traduit par l'évolution d'un épithélio-granulome ou d'un kyste avec leurs conséquences, —ou plus brutalement d'une arthrite alvéolo-dentaire, parfois dramatique—; je ne

parle pas des menaces, que ces accidents font courir, d'une infection générale ou métastasiée.

Certes l'obturation totale, débordant même la pointe radiculaire, ne me paraît pas devoir échapper à ces complications éventuelles;—du moins n'amoindrit-elle pas les défenses tissulaires et permet-elle à celles-ci de s'exercer—heureusement dans beaucoup de cas—sur des microbes qui d'ordinaire se laissent détruire sans résistance, mais avec une extrême lenteur, par les tissus mous périapicaux.

Et voici qu'apparaît la nouvelle tendance sous les procédés qui ont été apportés dans ces dernières années: ne plus tant chercher à détruire des bactéries déjà affaiblies que renforcer rapidement les défenses tissulaires et leur éviter la possibilité d'une défaillance éventuelle à l'occasion d'un fléchissement de l'organisme.

Déjà, pendant la guerre, Carrel avait amorcé cette orientation en proposant, pour la guérison des plaies anfractueuses, une substance chimique (l'hypochlorite de potasse, liqueur de Labarraque) dépourvue, grâce à sa dilution, d'agressivité sur les cellules constitutives et, au contraire, protégeant celles-ci tout en neutralisant les microbes,—pour tout dire, une substance chimique "cytophylactique".

Or, depuis six ans, notre laboratoire de l'Ecole a reçu diverses sollicitations d'avoir à préciser le mécanisme d'action de procédés conservateurs, dont il s'est avéré que leur pouvoir antimicrobien n'était que très réduit. Je veux parler, en particulier, de l'emploi des métaux colloïdaux préconisé par notre collègue Tixier,—de celui de l'ionophorèse appliqué par Bernard, de celui de l'ozone pratiqué surtout par Dechaume et par Vandrepotte, de celui de l'aiguille bimétallique proposé par Oppenheim et perfectionné par Coën. Ces procédés se sont montrés efficaces dans la pratique; le sont-ils plus que la simple obturation totale du canal? l'avenir nous le dira.

Mais je crois devoir insister sur le fait que ces procédés favorisent—par une action dont le mécanisme n'est pas encore approfondi, la vascularisation et l'apport leucocytaire (et cela est apparent macro- et microscopiquement avec l'ozone), dont bénéficie la défense tissulaire,—la recalcification des zones osseuses périradiculaires à mesure que s'amoindrit le processus inflammatoire (comme il apparaît nettement et parfois très vite sur les clichés de M. Coën).

Il m'a paru qu'il serait intéressant pour vous de voir se dégager de vos recherches cet aspect nouveau que me paraît devoir prendre la lutte contre l'infection—non seulement dans les tissus mous périodontaires,—mais plus généralement dans tout tissu assiéé par les bactéries.

III.—ARGUMENTATION DU DR MARCEL DARCISSAC, stomatologiste des Hôpitaux.

Je voudrais simplement ajouter quelques mots sur ce qui a été dit à propos de la question du traitement des canaux.

J'estime qu'il y a un principe qui doit dominer toute technique, c'est la simplification: pour qu'une méthode puisse entrer dans la pratique courante, il faut qu'elle soit simple et qu'elle ait subi l'épreuve du temps. Or, par l'utilisation de l'acide trichloracétique, nous arrivons à cette simplification de traitement avec le maximum de sécurité.

Vous savez que l'acide trichloracétique se présente sous forme de cristaux dont on obtient la déliquescence par adjonction de quelques gouttes d'eau dans le flacon qui les contient: c'est cette solution concentrée que j'emploie pour la désinfection de la chambre pulporadiculaire. Par son action hémostatique très efficace qui résulte de son action coagulante, l'acide trichloracétique nous permet, dans les pulpectomies, de réaliser très rapidement le traitement avec une hémostase absolue.

D'autre part, si l'on veille à ce que, dès l'instant où la chambre pulpaire a été ouverte, toute mèche qui pénètre dans le canal soit, auparavant, imbibée d'acide

trichloracétique, de même que tout instrument dont on peut être amené à se servir (tire-nerf ou beutelrock ou bourre-pâte) on peut être assuré qu'aucune infection ne pourra se produire. Nous ne pouvons pas avoir la prétention d'opérer avec une asepsie absolue au cours de nos traitements radiculaires, c'est pourquoi ces traitements pratiqués en quelque sorte "*en milieu d'acide trichloracétique*" nous apportent toute sécurité, l'acide corrigeant automatiquement nos fautes d'asepsie inévitables—et cela sans action nocive ni sur la dent ni sur le péri-apex.

De même quand nous aurons à traiter des dents avec foyers infectieux périapexiens, si nous pouvons établir un drainage suffisant à travers l'apex et faire pénétrer par cette voie des mèches imbibées d'acide trichloracétique, nous arriverons en deux ou trois séances à stériliser complètement ces foyers et à assurer l'obturation radiculaire dans les meilleures conditions de rapidité.

En dehors de la question de désinfection du canal se pose celle de son obturation. Ma pratique déjà longue m'a montré que nous avions dans la pâte, essence de girofle, oxyde de zinc, à laquelle nous associons du trioxyméthylène à la dose minimum de 1/60^e, une substance qui nous donne toute sécurité. D'autre part, si cette substance passe au delà de l'apex, elle sera parfaitement supportée.

Au sujet de cette pénétration de la pâte obturatrice dans la région apicale j'ai montré qu'il était possible, par une technique très simple, de s'opposer au passage de la pâte dans le foyer osseux; celle-ci pourrait constituer une sorte d'épine irritative pouvant être l'origine de phénomènes névralgiques plus ou moins intenses.

J'ai recours pour cela à mon procédé du "lipiodol tampon": en introduisant dans le canal une certaine quantité de lipiodol que je fais pénétrer dans le foyer péri-apexien par pression avec de la gutta-percha. Une fois cette cavité remplie de lipiodol, il va suffire de passer quelques mèches imbibées de chloroforme pour libérer le canal avant de procéder à son obturation à la pâte. Les jours suivants le lipiodol s'élimine et la cicatrisation du foyer osseux pourra se faire dans de très bonnes conditions, l'ostéogenèse n'étant plus gênée par la présence d'une masse plus ou moins importante de pâte formant corps étranger.

L'acide trichloracétique est également très intéressant dans certaines lésions des parois radiculaires qui normalement condamnaient la dent: je veux parler des faux canaux. Dans ces cas, il est facile de stériliser ces perforations accidentelles en employant l'acide trichloracétique dont l'action toujours superficielle n'accentue pas les lésions de nécrose: une ou deux applications d'acide trichloracétique suffisent en général pour obtenir la stérilisation du foyer osseux.

J'ai préconisé, pour l'obturation de la brèche radiculaire, un eugénate constitué par de l'oxyde de zinc auquel on associe, à parties égales, de l'alliage d'argent en poudre: celui-ci apporte à cette pâte le pouvoir "empêchant" de l'argent et, d'autre part, ce mélange, qui durcit facilement, même en milieu légèrement humide, obture la brèche d'une façon parfaite sans gêner la régénération osseuse. La radiographie prouve qu'on peut ainsi arriver à une guérison complète dans ces cas, jusqu'alors considérés comme incurables.

IV. — ARGUMENTATION DE M. PIERSON, chef de clinique à l'Ecole Dentaire de Paris.

Je veux tout d'abord excuser M. Housset qui a été obligé de partir. Il se montre, comme M. Bernard, adversaire de tout système et il approuve entièrement les théories exprimées par M. Lubetzki dans son exposé.

A la Société d'Odontologie, le 2 mars dernier, j'avais rapproché l'action du couple or-argent de la méthode d'Oppenheim de certaines applications du pouvoir oligodynamique de l'argent. Aujourd'hui, je citerai d'autres faits du même ordre.

L'appareil que je vous présente est le stérilisateur de Lakovsky. Cet appareil comporte deux lames d'argent fixées parallèlement sur le bouchon d'un flacon et de

façon à plonger dans le liquide à stériliser dont ce flacon est rempli. Le bouchon est fait en matière isolante et il est surmonté d'une petite cuve cylindrique en cuivre. Dans cette cuve et suivant l'axe de celle-ci, une tige de zinc, isolée, est fixée. Les armatures cuivre-zinc sont reliées électriquement aux lames d'argent. Si l'on emplit la cuve d'eau salée, un courant de quelques dizaines de milliampères passe dans le liquide du flacon. Ce courant libère de l'argent des lames et "cela suffit, dit Lakovsky, pour tuer en deux heures environ les milliards de microbes qui se trouvent dans un litre d'eau souillée". Ce stérilisateur est remarquable en ce sens que non seulement il stérilise l'eau mais que celle-ci acquiert elle-même des propriétés bactéricides. A cette eau active, introduite dans les voies digestives, Lakovsky attribue certaines propriétés thérapeutiques. Il en préconise l'usage notamment dans le traitement de la colibacillose. Remarquons que la quantité d'argent mise en jeu est infinitésimale. Dix millionièmes de gramme dans un litre d'eau!

En thérapeutique odontologique, une méthode de traitement des canaux infectés, décrite dans un "Brevet" allemand, s'appuie sur le même principe. Une fine tige d'argent est fixée au ciment dans un canal dentaire. Du côté coronaire cette aiguille est électriquement accessible et peut être reliée au pôle + d'une pile dont le pôle — est en contact avec la muqueuse. La liaison électrique établie au cours de quelques séances de traitement permet la stérilisation du canal et de la région périapexienne. Remarquons d'ailleurs qu'il est possible à un moment quelconque après la cessation du traitement de reprendre celui-ci sans désobturer le canal.

Mais si l'action oligodynamique peut être activée par le passage, entre deux électrodes d'argent, d'un courant électrique de basse tension, elle peut l'être aussi par la division de l'argent, c'est-à-dire l'augmentation de la surface utile de ce métal. Pour stériliser l'eau de boisson, par exemple, on peut utiliser des récipients contenant des granulés inertes de quartz, de ponce, ou de porcelaine recouverts d'une mince couche d'argent. Plus ou moins vite, assez rapidement en général, en deux heures par exemple, l'eau est stérilisée. L'action antiseptique est fonction de l'aire de contact de l'argent avec le liquide à stériliser.

En thérapeutique odontologique, la méthode de Trébitsch, de Vienne, qui comporte l'obturation des canaux dentaires avec une pointe d'argent et à l'aide d'un ciment à l'argent s'appuie sur le même principe.

Alors que la quantité de métal utilisée est quasi-infinitésimale, peut-on croire que l'action physico-chimique de l'argent soit vraiment efficace? Pensons à la théorie de l'action diastasique émise vers 1895 par Gabriel Bertrand. Ce savant a montré que 10—¹⁰, un dix-milliardième d'un métal, le manganèse suffisait à jouer un rôle biologique de premier plan! D'autres découvertes du même ordre ont fait dire à Gabriel Bertrand que "la vie est une oligarchie dans laquelle une foule d'éléments plastiques est gouvernée par un petit nombre d'éléments catalytiques"... Dans ces conditions n'est-il pas légitime de penser que l'action oligodynamique de l'argent intervient sinon purement, du moins en grande partie dans la technique de Coën? Dans cette méthode, le couple électrique peut très bien ne servir qu'à activer l'ionisation de l'argent!

Mais nous pensons que si l'action oligodynamique est réelle, il n'est pas nécessaire de placer dans le canal une tige d'argent. Car celle-ci réalise plus ou moins bien *in situ* la préparation d'une solution argentique active alors qu'il est possible de la mieux préparer au laboratoire pour l'introduire ensuite dans le canal infecté. Précisément, une telle technique permettrait d'éviter la double objection que faisait M. Lubetzki à la méthode Oppenheim-Coën, lors de la séance du 2 mars dernier de la Société d'Odontologie: possibilité de nuire à l'ostéogénèse par la permanence de l'aiguille or-argent; difficulté d'utiliser un canal obturé au ciment.

Un ami, M. Bouniol, pharmacien, a réalisé des préparations oligodynamiques dont j'étudie actuellement l'efficacité *in vitro* et *in vivo*. Les résultats obtenus sont

encourageants. Quoiqu'on en ait dit tout à l'heure, les solutions comportant de l'argent colloïdal sont *moins actives* que celles qui comportent de l'argent métallique. M. Bouniol l'a montré dans un travail de la Faculté de Pharmacie en date du 31 août 1934. Ainsi la désinfection des canaux peut être assurée par la mise en place d'une mèche enrobée d'une boue à grains *impalpables* d'argent métallique. Il est possible de préjuger que la stérilisation peut se produire même dans les canalicules de la dentine car l'action oligodynamique semble pouvoir agir à distance. J'espère apporter dans quelque temps de bons résultats de ces travaux, soucieux d'appliquer avec cette méthode l'un des plus chers principes de toute thérapeutique: D'abord ne pas nuire.

V. — ARGUMENTATION DU DR GEORG STEIN, de l'Institut Dentaire de Vienne.

Je crains de ne pas m'exprimer très bien en français; il est un peu difficile pour moi de suivre les présentations, mais comme il s'agit d'une question sur laquelle nous travaillons beaucoup à Vienne, je saisis l'occasion pour ajouter quelques mots aux communications que nous avons entendues aujourd'hui.

Le Dr Bernard a montré avec clarté quels sont les trois points du problème du traitement de la dent infectée: la pénétration, la désinfection et l'obturation; permettez-moi de faire quelques observations sur ces trois points.

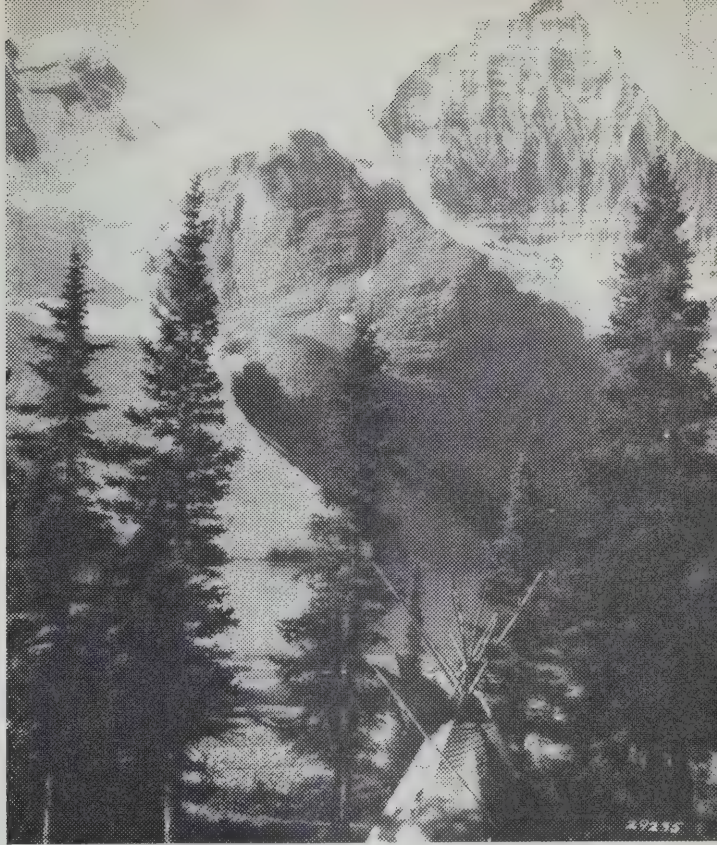
Il est admis aujourd'hui comme inévitable que la pénétration doit être faite jusqu'à la racine, mais il faut reconnaître qu'en pratique cela n'est pas aussi facile qu'on le dit. C'est pourquoi, malgré quelque expérience dans le traitement des racines, je n'oserais pas dire que je suis venu au bout d'une racine sans avoir fait un contrôle radiographique et j'estime qu'il n'est pas possible d'arriver à l'apex sans ce contrôle.

Quant à la désinfection, je considère, pour le moment, l'ionophorèse de Bernard comme une des meilleures méthodes qui, nous avons pu le prouver, fait en réalité pénétrer le médicament dans les ramifications de la pulpe; c'est de cette méthode que nous nous servons généralement en prenant quelques précautions.

Pour l'obturation, je me demande si les succès, dont nous avons entendu parler aujourd'hui à propos de ces tiges bi-métalliques, ne sont pas dûs en grande partie à l'obturation au ciment. Nous, nous obturons au ciment et nous avons de bons résultats. Il faut vous dire que, depuis des années, je pratique la méthode de Lentulo; je préconise le traitement des dents infectées en une seule séance et je tiens à souligner cette méthode qui me semble réaliser un progrès dans le traitement de la racine. Elle nous permet de finir un traitement de racine en un temps beaucoup plus court qu'il n'était possible jusqu'à présent; mais nous devons vous dire que quand nous commençons le traitement d'une molaire, par exemple, et que nous avons l'intention de le terminer en une seule séance, nous avons soin de prévoir une heure et demie pour cette opération; si nous additionnons le temps qu'il aurait fallu pour faire le traitement en plusieurs séances, nous voyons que nous avons réalisé une grande économie.

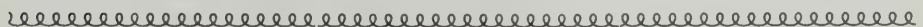
Encore un mot sur le traitement de la racine en général; nous avons entendu dire que l'amélioration du traitement de la dent infectée est une réaction contre la mode des extractions qui a suivi l'époque de l'infection focale; je dois cependant signaler qu'il ne faut pas négliger le danger résultant d'une infection péri-apicale et c'est pourquoi j'estime qu'il serait nécessaire, plus souvent que cela n'a été le cas jusqu'à présent, d'enlever une dent quand le traitement n'est pas parfait en quelque point.

L'Odontologie, (Janv. 1938).



Courtesy of Canadian National Railways.

MOUNT ROBSON, the highest peak in the Canadian Rockies, (12972), which is one of the fascinating holiday spots in the mountains. There are several live glaciers on Mount Robson and at its foot is located Berg Lake. This majestic peak is seen from the main line of the Canadian National Railways between Jasper National Park and Kamloops and as the train stops in each direction, it becomes the target for all the available cameras. There is a summer camp at Mount Robson where visitors may spend a restful, yet invigorating, holiday with plenty of riding, hiking and fishing.



When a man increases the depth of his life he grows in greatness. As David Grayson writes: "There is nothing strange about great men; they are like us only deeper, higher, broader; they think as we do, but with more intensity; they suffer as we do, but more keenly; they love as we do, but more tenderly."



R. A. ROONEY, D.D.S.

EDMONTON, ALBERTA

PRESIDENT-ELECT OF THE CANADIAN
DENTAL ASSOCIATION

SECRETARY, TREASURER, REGISTRAR
OF THE ALBERTA DENTAL ASSOCIATION

The Teaching of Oral Surgery

by JOHN W. GERRIE, B.A., M.D., D.D.S., C.M., D.L.O.

Department of Oral Surgery, McGill University

IN CONSIDERING the teaching of Oral Surgery, may I deal first with some of the phases of undergraduate teaching,—the part we, in oral surgery, contribute to the graduating dentist. Then may I go further and throw out feelers into more controversial aspects of the subject, with particular reference to the part we as teachers in oral surgery may contribute to our common war effort. By these controversial subjects, I mean such studies as anaesthesia, surgical prosthesis, hospital internships and the postgraduate teaching of oral surgery with reference to our military medical and dental corps.

UNDERGRADUATE TEACHING

Dr. Charron of the University of Montreal prefers to impart to his students a broad and reasoning approach, to remove their "Blinkers". He wishes them to see the patient first, the patient's mouth second. Coming from McGill and the Montreal General Hospital where Sir William Osler popularized bedside clinics, cultured the students powers of observation and advocated treatment of the patient for the patient's sake, these words of my colleague strike a responsive note. I would much prefer a graduating student to be a little less proficient in the removal of a tooth and to be able to reason what brings that tooth to extraction, than that he be overly skilful in the removal, not knowing the why and the wherefore of his actions.

Some several years ago at McGill, in collaboration with our Dean and your President, it became necessary to set down briefly the aims of our department in the undergraduate teaching of oral surgery. It was felt that the teaching should be broad in its scope and yet, a detailed knowledge and training in the arts of exodontia and local anaesthesia was essential. We decided to prepare a broad bed of study in the principles of surgery and medicine in general, of diseases of the mouth in particular, and to set down in this broad bed, a detailed training in exodontia and local anaesthesia. How have, or how are we accomplishing these aims?

We are not trying to make oral surgeons out of our students, but rather to place them in a state of knowledge so that they can reason and appreciate the things they see; so they can reason their way, in an emergency, to doing something out of the ordinary; so they can reasonably seek the help and co-operation of the persons or institutions best qualified to deal with the extraordinary things with which they may come into contact. In short, to place them in a state of knowledge and experience in which they appreciate their limitations and know the ways and means of dealing with those limitations. Let me be more specific and go into the details of some of our teaching.

In the teaching of Oral Surgery at

McGill, we are fortunately associated. Our dental clinic is situated in the Montreal General Hospital. It is a department of the hospital and Third and Fourth Year Students are there all day every day. It has tremendous outpatient medical and surgical departments. Exodontia and oral surgical clinics are held almost daily and students can be whipped away at a moments notice for brief chair or bed-side clinics on cases in point. This association with a large general hospital is very useful in providing a broad understanding of diseases of the mouth.

BASIC PRINCIPLES

The basic principles of surgery are stressed and I feel the graduating student should be quite familiar with the principles of inflammation, abscess and ulcer formation, cellulitis, sepsis, asepsis, etc.: That he should understand the significance of case histories and physical examination: That he should be familiar with the general and special services and examinations that are available in a hospital. In short that he should not stand in awe of the hospital but should be familiar with what it can do for his patients. These things are dealt with in brief didactically and further stressed as the patient is seen at the bed-side. For example, in giving a bed-side clinic on a patient suffering with Ludwig's Angina, I will show the importance of the history, the physical examination, the urine and blood examinations, deal with blood culture, sulphonamide blood levels, roentgenograms, the preparation of the patient for operation and operating room technique. After two years exposure to such surgical principles, our student is not an oral surgeon, but he is at least able, and probably more able to deal with the exigencies of an oral situation than is his medical confrère of equal standing. Individually they are both weak. Together they make a fine team.

The amount of undergraduate teaching advisable in the handling of jaw fractures

is a debatable subject. We take a broad view and show the undergraduate all cases that come through the clinic and give him lectures on details and fundamentals. Here again our aim is not to make him proficient in the handling of these injured patients, but to let him see them, and so equip him, that he could if necessary, or if he wished, look up the principles and worry his way through a case. At least to so equip him that he will be welcomed with open arms by his medical confrères in the treatment of these "No man's land" conditions.

CANCER

Probably foremost among diseases of the mouth is cancer. Our students must become "Cancer minded". The dictum "Early cancer is painless and curable, late cancer is painful and incurable" is drilled into them from the middle of their third year. We do not wish them to take biopsies and necessarily diagnose and treat cancer, but we do insist that they suspect cancer, that they see cancer, its diagnosis and treatment in all its phases. Two of our final year students attend the tumour clinic of the Montreal General Hospital, each week. They see and feel the lesions which are presented. They see the results of surgery and irradiation. They see the successes and failures. They see these things and are impressed. It is my boast that a graduating McGill student will not miss or neglect an early or incipient cancer in the mouth of one of his patients.

Turning to the benign and cystic neoplasms, our teaching material is drawn from the medical, surgical and dental outpatient departments. These patients are shown at chair clinics, as they present themselves. Again we try and point out or make obvious to the student his limitations,—to show him those cases which can be conveniently handled in the chair, and those more complicated ones which will require further investigation and exploitation of the facilities of the hospital.

And so it runs, through the whole gamut of oral surgery. Lectures, chair and bed-side clinics are given in most subjects. These include studies of the mandibular articulation, cleft palate and cleft lip, diseases of the nasal sinuses, infections of the neck and floor of the mouth, especially those of dental origin; the emergencies of surgery such as syncope, haemorrhage, shock and collapse; artificial respiration, the diseases of the salivary glands, injuries, congenital deformities and reconstruction procedures about the mouth. Special attention is paid to the various types of stomatitis of local or systemic origin. The course is designed to show him these conditions, to make him aware of their existence and of the principles of their treatment, so that he can, if necessary, make an attempt at their treatment himself, or at least be familiar with what should be done and where it can be done to the reasonable advantage of his patient.

Concluding this two years exposure to oral surgery, the graduate has acquired a broad understanding in which to couch his knowledge and ability in the art of exodontia and oral surgery. He is prepared to start on postgraduate study and training in oral surgery if he so wishes. He is ready to become a useful interne. He is a person, well qualified to speak on oral disease, probably more so than his contemporary medical colleague. He is at least able to co-operate with that medical colleague in the efficient handling or disposing of patients suffering from oral disease. He is ready to become a useful dental officer in yours or our fighting forces.

And now with the advent of war! With your participation and our participation in this war, comes a postscript to the hum-drum peace-time teaching of oral surgery. It becomes a little more grim. The tempo is speeded up. With your government and our government clamouring for a faster turnover of a finished

product, not only do we need more students graduated, but graduates able to jump in and practice their bit of war-time dentistry and surgery where and however the fortunes of war may lead.

ANAESTHESIA

A word about anaesthesia, not local anaesthesia! No one will question our dentists ability to wield, and wield affectively a wide measure of skill and usefulness in the application of local anaesthesia. But we, in dentistry, have been on the verge of scrapping general anaesthesia. It was my good fortune to be with No. 1 Canadian General Hospital in England, and situated in Birmingham-Coventry area during the sore trials of those two stout cities. Our hospital, a military hospital, was ready and willing and did take in civilian air-raid casualties. We had one well-trained anaesthetist. In going over our staff to allot the officers to "action stations" in the event of dire emergency, our colonel, in consultation with his two lieutenant-colonels, selected our dental officer as the best fitted person to act as a second-string anaesthetist. So let us not lose sight of general anaesthesia. Two dentists presented general anaesthesia to the world 100 years ago. May be we can still be of some service.

HOSPITAL INTERNSHIP

This is even a more poignant juncture to bring up the question of hospital internship. Hospital internship is a valuable asset to peace-time dentistry. Hospital internship is an invaluable asset to war-time dentistry. Men, so-trained, are hospital-minded; they are anaesthetic-minded; they are oral surgery-minded. There are many places in the army for them. Hospital internship is a good thing for the hospital. Hospital internship provides better dentists for our war-machine. Let us prevail upon our hospitals, upon our governments, to make these jobs available; to keep the men in them at their posts; and to provide them

with their correct places in our war-time set-up.

POSTGRADUATE TEACHING

CONTRIBUTION TO WAR-EFFORT

Possibly we as teachers of oral surgery can do more. There is wide scope for the army dentist and that scope widens with increase in training and ability. Bunyan, an English dentist collaborated with Stannard to produce the Bunyan Bag, an oiled silk-bag now widely used in the treatment of hand and foot burns. This brought much comfort to many an airman who baled out of a blazing cockpit in the battle of Britain. In a Canadian plan to provide plastic surgery for the forces you will find dentistry and the dental services intimately woven through the whole fabric. To quote your own Brigadier General Fairbank and Colonel Robert Ivy, discussing jaw injuries: "Early observation by a dental surgeon is desirable and it is assured in our medical units in the combat zone. The results are usually directly proportionate to the nature and character of the emergency treatment received, and these end results are the greatest concern to our medical and dental officers." But these officers need teaching and training. Kelsey Fry, Warwick James and Sir Harold Gillies in their report to the British Army Council on Maxillo-facial injuries conclude: "As regards the training of dental officers, we

are of the opinion that this could, with advantage, be extended to include, not only the principles of preliminary treatment in the field, but also the principles of subsequent treatment. It is essential for these officers to know generally the various stages and difficulties up to the completion of treatment in order to ensure that the appropriate preliminary treatment is carried out. We, therefore, strongly recommend that all dental officers should undergo—a special three months course of instruction on the treatment of Maxillo-facial injuries, including practice in inter-dental wiring and the construction of inter-dental splints—." Is this not where we fit in as teachers in oral surgery? Can we not offer to our dental services, and even to our medical services, stimulating and instructive courses in the principles of oral surgery?

May I conclude with the following summary of thought: (1) That we make our undergraduate teaching a broad study of diseases of the mouth, specializing in local anaesthesia and exodontia; (2) That for the moment and during the present emergency we do not lose sight of, but rather foster a familiarity with general anaesthesia; (3) That for our war-effort's sake, for dentistry's sake and for the hospitals' sake we sponsor hospital internship; and finally (4) That we offer stimulating teaching in oral surgery to the armed dental and medical services.

Planning for Security in Dental Health with the Help of the Dental Clinic

by G. A. C. WALLEY, D.D.S., M.S.D., Vancouver, British Columbia

WE HAVE been asked by our Dental Association for suggestions. Recently we had a visit from Mr. A. E. Rowlett of Great Britain representing both the British Ministry of Health and the

Dental Society. In his address it was suggested that we need a fully representative body to advise and suggest possible plans to fulfil our obligation to society in planning to make available, adequate

dental services. More recently, we have had a "Memorandum on National Health and Health Insurance" by Hugh H. Wolfenden and Dental Committee brought to our attention.

There is no doubt that we live in a changing society with its purpose "security for all". It must be recognized that available, adequate dental service is part of that security. We, as individuals of the dental profession, will either play our part wisely, voluntarily and sympathetically, or short-sightedly, grudgingly and through compulsion, but play our part we must. Our attitude in the past has suggested to the public a lack of interest. To argue what is available or adequate dental service is beside the point. Available service means possible service without conditions. Adequate dental service is definitely full dental service and not a partial service. The standard of practice, whether public or private, must be kept high.

The resultant findings in dental surveys in schools, industry or community, more or less add up to the same average. What is generally true of a community is generally true of a province or nation. Observation and personal experience, surveys, the dental as well as other literature, prompt the following somewhat conservative assertions and conclusions.

Twenty-five per cent of our citizens, or even twenty-five per cent of our families, have not received incomes sufficient to make it possible to avail themselves of any dental service. A further forty per cent, because of both lack of sufficient income and thus desire, or apathy, avail themselves of little or no dental service except emergent treatment. Thus at least sixty-five per cent do not receive adequate dental service. Of the remaining thirty-five per cent, less than one-half, or fifteen per cent, receive possibly adequate periodic dental service. If adequate dental services were made available for all, the present facilities would not be sufficient,

whether of a public or private nature. Army, Navy and Airforce requirements prove this.

In the press, from the political platform, from workmen in industry, from the agriculturalist, and on the street corner, are heard attacks upon the dental profession, and the desire definitely expressed for available dental services. The advertising dentist and those disreputable dental labs. take refuge behind, and gain their vocal support, at least, largely from those individuals speaking on behalf of the sixty-five per cent who have not the income sufficient to avail themselves of desired periodic, adequate dental services. The cause of this lack of desired dental service on their part has, in many cases, been levelled at the ethical practice and organizations of dentistry, and in support of unethical, advertising and supposedly cheaper dentistry. The press is inclined to support the advertiser because he is a source of income. The economic factor looms very large, and is possibly the determining cause factor; in the lack of dental service for sixty-five per cent of our population; in unethical practice; and for some of our short-sighted individual smugness.

In attempting to meet this lack of needed dental service on this continent, Dentistry has developed the Dental Clinic. The two most frequent and efficient ventures have been the School Dental Clinic and Industrial Dental Clinic. The service rendered by these two varies from a Diagnostic and Emergent Treatment Service to a Full Dental Service. It is logical to assume that this method best suits the purpose in helping solve the problem of providing adequate dental services.

There are, naturally, errors, omissions, and room for clarification, improvement and enlargement in clinic dental service. We hear such criticisms as: the clinic is a mill, enhances lower standard of practice, no personal touch, no choice for

patient of a dentist or dentist of patient and treatment, and no personal incentive for dentist to improve his art or financial return. These are, in some cases, just criticisms. Nevertheless, these criticisms do not eliminate the clinic as a partial answer, at least, to our problem. The criticisms must be considered.

If the patient has a choice of dentists in larger clinics, and dentist freedom to advise treatment, a personal touch is developed, and the mill aspect is absent. A number of dentists working together is conducive to better workmanship, co-operation, and more skilled service, and thus a higher average standard of practice. If the clinic is modernly and fully equipped and sympathetically supervised, with time allowances made for refresher, post-graduate, and graduate courses and conventions, standard of practice will increase. Overwork can be overcome through limiting clinic hours and number of appointments. No clinic membership or service should make operative treatment compulsory.

The School Dental Clinic service executive organization would possibly serve best as a Dental Department of the Department of Public Health. The local clinic would be directed by a director or superintendent and staff, depending upon the size of the clinic, who would be responsible to the Dental Department of the Department of Health and the local executive body, such as a municipal school board. The local executive body represents those whom the clinic serves, the superintendent or director represents the staff and clinic proper, and is responsible to the Dental Department of Health and local executive body for ethical, operative or clinic practice, but disallied from political interference.

The location of the school clinic, for reasons of efficiency, would be in the school or schools, or if rural or smaller schools, served by a mobile dental clinic (trailer type). The patients are more

easily accessible for appointments, saving both classroom and clinic time and loss of time through absentees. A direct contact exists between teaching staff, medical staff and dental staff, making for co-operation and enhancing general health education.

The general, or possibly compulsory, dental service rendered would consist of a periodic oral explorer and mirror dental examination, charted on a clinic dental record and work sheet, together with a parents' dental notification card, given to each child, showing findings of the examination. All classrooms would be given yearly progressive periodic lecture or instruction on some phase of dentistry or dental hygiene. A short monthly parents' educational letter, emphasizing some dental item, as cleaning teeth, deciduous teeth, diet, abscesses, etc. given to each child of the three lower elementary grades to take home. The operative or treatment service is applied for by the parent filling in the application blank on the back of the parents' dental notification, and the child returns this to the clinic through the teacher, school nurse, or some such medium. If the private or family dentist completes the operative treatment, he signs the card and the child returns it. Thus a reference record is available, showing the mouth health of each child.

Today the operative service in school clinics is generally full service, exclusive of gold work or more expensive and skilled services. A few clinics do some necessary more expensive and skilled service on a part-pay basis (parents pay cost). Orthodontics is not practiced in any school clinic to my knowledge. The dental service is usually available for elementary grades and schools, while a few continue it for all grades and schools. Eligibility for clinic operative service is today usually governed by a maximum monthly income per member of the family, which means it is limited to a very

low income group, the lowest twenty-five per cent or less.

The dental assistant or hygienist is a definitely needed part of the staff of any school clinic. She definitely promotes efficiency in every aspect.

The future school dental clinic will possibly give full dental service (with possible part-pay by the parent for necessary and desired gold, prosthetics, orthodontics, and the more expensive and skilled dental services). The service would be available for all grades and school pupils upon application and consent of the parent.

As the school clinic is financed through taxes, in the same manner as is education, (local municipal taxes augmented by a provincial grant) the service logically should be an available public service not limited to the minimum income group or elementary grades. A low income eligibility is conducive to apathy on the part of some parents and embarrassment to some pupils and even in some cases considered charity. In reality, it is no more charity than is education. Under present income qualifications to receive clinic operative service, experience shows forty per cent of our school children do not receive yearly needed dental services because of economic and apathetic personal family reasons.

An efficient full service school dental clinic, available through consent of the parent, and with no financial eligibility requirements, would soon rank with our educational services as being a public service, giving at least average better service at less cost, and rendering more service than can be done under private enterprise.

The school dental clinic is possibly part of the answer to our obligation as a profession to the public in planning for security.

THE INDUSTRIAL CLINIC

Having been approached and invited to meet with a committee representing

4,000 workmen of a large industrial plant, to discuss Industrial Dental Clinic service, prompts the following, which may be of interest.

The workmen were in a comparatively well paid, efficient, and progressive industry, having general pay deductions, commitments for Workmen's Compensation, family medical and hospitalization, and a goodly number with a housing commitment, other than defense or war tax. The Dental Clinic desired was a modern, fully equipped clinic offering average better full dental service; to include, when necessary or desired, the more expensive and skilled dental services, as gold work, prosthetics and orthodontics. The service was to be available to both workmen and their families, average 3.7 members per workman.

The executive organization of the clinic desired was to be of a public nature, consisting of a joint or single Board of Trustees and Directors, who would hold in trust the capital, goods or property and finances in the form of fees, loans, gifts, or endowments, and decide on matters of general policy. The Board would represent all parties concerned, workmen or members receiving service, industrial management, the clinic itself and staff. The superintendent would be responsible to the Board of Directors for standards of clinic practice and operation.

The service rendered was to be full dental service, with more expensive and skilled dental service available when desired or needed by the membership upon a further part-pay cost fee per unit of work.

The highest pay commitment that seemed logically possible and agreeable was \$18.00 per workman or family.

After considerable discussion and research of the dental literature and some very helpful correspondence, the following facts and suggestions were given. The financial aspect of insurance, as applied to accident and sickness and hospitaliza-

tion will not apply in the same degree in dentistry because ninety per cent or more require dental service every year. The fee of \$18.00 per year per workman in itself seems insufficient to finance such a project, and it is hoped the industry could see fit to augment the funds.

Having in view the findings of dental surveys in industry and in schools, the accumulated dental service needs would be immense. The difficulty of obtaining adequate staff during the war seems almost impractical.

As industry would save in lost man hours and in efficiency of workmen from such a service, it seems logical to suppose that industry might meet the costs of at least diagnosis and emergent treatment for the workmen. As the province or nation will gain and save in health of its citizens, it seems logical that some form of subsidy might be granted from the government or some endowing body.

Two plans of service, "A" and "B", supplementing each other, are possibly advisable if financial and psychological factors are considered.

Both plans are to be pay roll deductions and a condition of employment once accepted by the individual.

Plan "A" (Supplementing Plan "B").

Workmen's Diagnostic and Emergent Dental Service. This for workmen only, financed by the industry or industry and workmen jointly, and a condition of employment.

The service would include:

Oral explorer examinations (periodic), diagnosis, x-ray, prophylaxis, local anaesthetic, dressings, treatment and extractions if needed, denture repair (limited), full dental service in case of accident while in employment.

Plan "B" (Supplementing Plan "A").

Family full dental service, to be a condition of employment once membership is accepted.

To include all services of Plan "A", plus treatment of any kind, fillings (cement, amalgam and synthetic porcelain).

The more expensive and skilled dental service, as gold work (fillings, inlays, bridgework), dentures (full or partial), and orthodontia on an individual part-pay (cost) fee per unit, because of increased time and material costs is advisable.

Very few (possibly two or three) clinics as yet render the more expensive types of dental service, even on a unit fee basis. The cost of operating industrial dental clinics rendering full dental service, exclusive of the more expensive and skilled services, varies from \$3.50 to \$5.00 per hour per patient. A cross-section of clinics with service varying from diagnostic to full service, exclusive of the more expensive dental service, show cost varying from \$.64 to \$9.45 per capita.

One would expect to find that the average units of dental service required per family of 3.7 members per 1,000 workmen in industry, based on other industrial and school dental surveys, to be approximately 25 units of dental service per family.

The Industrial Dental Clinic and School Dental Clinic, supplementing each other, will lower the incidence of required dental service and reduce cost of both services. The private practice of dentistry, supplemented by the public or clinic practice of dentistry in schools and industry, seems to be the most logical, possibly the most efficient way to plan for security in dental health.

Do not burn or destroy this publication. Sell it or give it to a salvage organization. It is needed for victory.



PRINCE EDWARD ISLAND



Editor—M. H. GARVIN, Winnipeg

SASKATCHEWAN



A S S O C I A T E E D I T O R S

D. T. Waye, Charlottetown

QUEBEC



E. M. Laurin, Montreal

ONTARIO



T. R. Marshall, Toronto

F. C. Harwood, Moose Jaw

NOVA SCOTIA



S. G. Ritchie, Halifax

ALBERTA



John Clay, Calgary

NEW BRUNSWICK



W. C. Carruthers, Saint John

MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



H. M. Cline, Vancouver

C.D.A. Delegates' Meeting

The first concern of every dentist in Canada should be to help win the war. Everything else is secondary even to the much-talked-of peace program. However, that does not mean that no thought should be given to the post-war period but rather that every effort should be made to plan for the future. This demands intellectual leadership which is now more vital than ever. To formulate, to clarify, to vitalize our professional ideals as we face an uncertain future is the heavy burden which rests upon the Canadian Dental Association.

It was in this spirit that the Board of Delegates of the Canadian Dental Association convened in the Royal York Hotel, Toronto, at 9 a.m., Thursday, May 14. As a rule the business presented at these meetings is completed by Saturday noon but on this occasion it was five o'clock Monday afternoon before the final motion to adjourn was made. Some of the sub-committees worked evenings and well on into the middle of the night.

Many important matters concerning the practice of dentistry in Canada were discussed fully and decisions reached. The problem which gave the most concern was the one of health insurance. Very many hours were spent in arguing every angle of this contentious subject but finally a series of

principles and a plan of procedure were unanimously agreed upon, much to the satisfaction of every member of the Board. These conclusions are to be presented to the various Dental Boards of Canada for consideration and at a later date will be published.

The financial side of the Association is brighter than at any time in its history. All the provinces have agreed to pay the four dollar membership fee for all men in active, private practice commencing in 1942. Manitoba is prepared to pay for all of its members serving in the Dental Corps. Alberta is prepared to do so if a majority of the other provinces will do likewise; the other provinces do not approve of this principle, which of course, will reduce the funds which otherwise would be available to the C.D.A. and to that extent will curtail a number of activities which should be undertaken.

Reports were given by the Committees on Dental Health, Dental Legislation, Dental Education, Public Relations, Indian Affairs, Ethics, National Dental Progress and Journal. The Committee on New Constitution brought in a most carefully worked out report but this has to receive further consideration. These reports will be published later in the Journal.

Dr. Vernon Fisk, our C.D.A. delegate to the First Inter-American Orthodontic Congress reported that the delegates to this Congress unanimously endorsed a resolution that all the Americas should unite in an Inter-American Federation of Dentists. The C.D.A. delegates approved of this, believing as Dr. Fisk pointed out, that in view of present world conditions, closer co-operation will be inevitable between the professional men of the nations comprising the Western hemisphere.

The writer came away from this gathering feeling that it was the most strenuous dental meeting he had ever attended, however much was accomplished, as the future will bear witness. He came away with a stronger conviction that we should re-examine our past trends, that we should face the issue of whether we intend to work largely for our own selfish interests in so far as we are allowed, or whether we are going to give a greater consideration to the welfare of mankind in general. Is what we have done the best we can do for tomorrow? Most of us need to do an immense amount of thinking about what kind of dental set-up we would like to have prevail after this war is concluded. And we should realize, too, that any plan framed by the leaders will fail unless it has the hearty and generous support of the average dental practitioner.

Conventions

29TH ANNUAL MEETING OF THE AMERICAN ACADEMY OF PERIODONTOLOGY,
COPLEY PLAZA, BOSTON, AUGUST 20-22, 1942.

AMERICAN DENTAL ASSOCIATION, BOSTON, MASS., AUGUST 24-28.

18TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL
HOTEL, MONTREAL, SEPTEMBER 23-25.

CORRESPONDENCE

Dentistry Overseas

Canadian Dental Corps Overseas,
February 25, 1942.

Condensed from a letter to Dr. Stanley
Bagnall, Halifax, N.S.:

We are having quite a good time over here and getting through as much dentistry, I think, as in Canada, in spite of other diversions.

The dental health of the army seems to be progressing very favourably. It is getting down now to be more of a problem of maintenance than of reconstruction. Most of the men—the majority of whom had no dental attention before the war—are coming back voluntarily for more or less regular attention. It will give the dental profession something to think about as far as post-war public health is concerned.

Vincent's infection continues to be a bug-bear. Right now it is down, probably due to an intensive campaign through the Canadian Corps re cleanliness of dishes and early reporting for treatment for any sore gums by the men. I have seen a great deal of it due to the fact that at times I have had to look after from four to eight thousand troops.

It is undoubtedly infectious and transmissible but I think in a much less degree after treatment is instituted. Scaling early and often is of the highest importance; what you use for painting the gums, not quite so important. I think things which injure the mucosa or make the teeth hypersensitive are contra-indicated. I have used gentian violet. It stains the fingers badly but I ran out of it and am now using a concentrated solution of silver proteinate which works very well and is a bland agent. We can't get Fowler's solution and peroxide very well now and I find that a saturated solution of salt works quite well. Sodium perborate, if used for long, makes the teeth hypersensitive in many cases.

I feel strongly that most of the cases of Vincent's are induced by a lowered resistance of the oral mucosa probably caused by a lack

of vitamin C. Most of the cases I see now look more like a mild form of scurvy with a light touch of Vincent's infection superimposed. Unfortunately, it is very difficult to get ascorbic acid at all, much less in the quantities required.

Connected with a small hospital as I am, I have been able to experiment with prontosil in very severe cases and found it very effective. I have only had five severe cases since I started using it but all did very well after a three-day course.

I was up to the Barts plastic surgery quarters at St. Albans and saw quite a lot of face and jaw surgery including two osteomyelitis operations on the mandible and a bone graft of the angle. They use a pin fixation on the small fragment (extra-oral) combined with a cast silver all-over splint on the teeth connected by a bar with universal joints which can be locked. The silver splint is cast in an expanded mould. They use cancellous bone for the graft from the crest of the ilium. It is chopped into small fragments and packed and wedged in. It is very soft bone. They say that it gets fairly rigid in about three weeks. They don't think periosteum matters at all.

Generally we have two night lectures a week and one night convoy, (night driving training schemes with practically no lights). We have had some range work with rifle, revolver and tommy gun. I have a concentrated bout at dentistry every morning. Monday afternoon I was on a ten-mile route march half cross country. Tuesday I worked in the office until 3:30, then another five mile hike cross country. Wednesday afternoon is sports day, so along with most of the other officers I took part in a three-mile cross country run with the men (didn't run all the way). Friday afternoon I start again on the motorcycle as I haven't been on one for three months. So as you can imagine life is very interesting.

(Signed) CAPTAIN MURRAY LOGAN.

Let a man be true in his intentions and his efforts to fulfil them, and the point is gained, whether he succeed or not.

DENTAL CORPS NEWS

Women's Auxiliary to C.D.C., M.D. No. 11

A Women's Auxiliary to the Canadian Dental Corps, M.D. No. XI, has been formed in Victoria, with the approval of the District Dental Officer and the Command Dental Officer for Western Air Command. Membership consists of wives, mothers, and immediate families of officers, N.C.O.'s, and men of the Corps, wives of civilian dentists, and interested friends. Donations have been received from the British Columbia Dental Association and the Victoria Dental Society.

At the present time, the Auxiliary has 38 paid-up members. Sixty dollars worth of wool has been purchased and is being knit into sweaters and socks. Packets of 300 cigarettes have been sent to 58 men overseas; 3 men leaving have received parcels of cigarettes or

candy, and one in hospital here, a magazine. Plans are being made for a tea and a sale of home-cooking. After the first of July, regular monthly meetings will be held in the Y.W.C.A.

It is hoped to have a branch Auxiliary in Vancouver in the near future.

Officers have been elected as follows: Honorary President, Mrs. E. Fraser Allen; President, Mrs. J. C. Foote; Vice-president, Mrs. C. W. Steele; Treasurer, Mrs. E. S. Fowles; Recording Sec., Mrs. W. B. Milburn; Corresponding Sec., Mrs. H. R. Turner; Conveners of Committees: Ways and Means, Mrs. J. D. Johnson; Parcels, Mrs. W. R. Loudon; Knitting and Wool, Mrs. A. Poyntz; Visiting, Mrs. A. S. Webster; Publicity, Mrs. B. E. Nickells.



Lieut.-Col. R. H. McDougall, M.M.

A well known dentist of Moose Jaw, Sask., and Victoria, B.C., has recently been promoted from Major to Lieut.-Colonel.

Lieut.-Colonel McDougall served in France during the First Great War in an infantry unit and has since maintained his connection with the Canadian Militia as an officer in the 10th Field Ambulance, R.C.A.M.C.

He practised dentistry at Moose Jaw, Sask., and then at Victoria, B.C.

Lieut.-Colonel McDougall was appointed Command Dental Officer Western Air Command in December, 1939, and in August, 1941, he was posted to No. 40 Company, C.D.C., No. 4 Training Command, as Command Dental Officer, where he is at present stationed.



No. 8 Dental Company, C.D.C., C.A. (A), 5th Canadian (Armoured) Division, which has arrived overseas.

1st Row, left to right: Capt. J. L. G. Carson; Capt. S. M. James; Capt. F. T. Bowen, Qr. Mr.; Lt.-Col. J. C. W. Broom, O.C.; Capt. J. D. Barnet, Adj.; Capt. R. I. Gilbert; Capt. J. B. Rumberg. 2nd Row: Capt. T. I. Guilboard; Capt. S. M. Somers; Capt. C. S. Lea; Capt. G. T. Walker; Capt. C. G. Stewart; Capt. T. E. Cragg. 3rd Row: Capt. H. A. McIntyre; Capt. G. W. Sugden; Capt. L. I. Duffy; Capt. M. Bay; Capt. L. J. Saunders; Capt. A. M. Clark; Capt. C. G. B. Grant.

NEWS FROM THE PROVINCES

BRITISH COLUMBIA:

Dental Association Convention

The Annual Convention of the British Columbia Dental Association was held in the Empress Hotel, Victoria on May 1-2.

The clinicians were introduced and welcomed by Capt. J. C. Foote, M.S.M., the President, and the address of welcome was given by Dr. G. F. Amyot, Provincial Health Officer. Dr. Amyot stated that it was the desire of his department to do everything possible to educate the public in the value of preventive dentistry, stressing particularly the pre-school child. He complimented the dental profession for their co-operation and called upon them for continued interest and assistance

in matters pertaining to Dental Health.

The featured clinician was Dr. J. C. A. Harding, past president of the Southern California Dental Association and author of the "San Diego Plan" of patient financing. Dr. Harding presented his subject in three parts, (a) The philosophy of ethiconomics, (b) The technique of patient management, (c) Putting permanence in practice. He is an enthusiastic and fluent speaker and covered the subject of practice management in a manner helpful to all. Saturday morning Dr. Harding staged a dramatization of the technique of patient management, with the dentist, dental assistant and patient, enacting the routine of an average day in a dental office. The dental assistants were guests at this meeting.

The Table Clinics were, as usual, well attended and permitted those attending to clear up any difficulties they had and to improve their technique. These included a table clinic by the Canadian Dental Corps on Fractures of the Jaws—actual cases demonstrated by radiographs and models. The exhibit of the Field Equipment of the Canadian Dental Corps demonstrated to civilian dentists the efficiency and organizing ability of the officers directing the Corps. Dr. A. J. Garesché, Victoria, who has practised dentistry for over fifty years presented an interesting display of early dental instruments, which illustrated well the debt we owe to those early pioneers in dentistry. Replacement of tooth structure with Acrylic was well presented by Dr. Bernard Jankelson, of Seattle, who by means of models demonstrated the construction of Acrylic Jackets and Inlays.

The Vancouver Diagnosis Study Club under the leadership of Dr. J. R. Ingledew and Dr. J. D. Stibbs presented "Radiodontic Technique and Interpretation" using an x-ray machine, slides and models. This study club has spent much time on the subject and their presentation was practical and helpful. Dr. C. S. Ballard, of Seattle, presented a Modernized Denture Technique which was well received. Drs. Robert Stewart, Wm. Miller and W. K. Sproule, of the Vancouver Ferrier Gold Foil Club, inserted classes 5, 2 and 3 gold foil fillings. This Club's work is always the admiration of all who see it. We were honoured in having Dr. Ferrier present at the meeting. The Dr. J. T. Sweeney Technique of Amalgam Manipulation was well covered by Dr. Wm. Anderson, of Seattle. Dr. Jack Hoelscher, of Seattle, prepared a Class 3 porcelain inlay and Dr. O. A. Anderson covered rubber dam application, jacket preparation under dam and silver nitrate technique. Dr. B. E. Nickells, of Victoria, for some years has been doing research work on the prenatal development of the deciduous teeth and by means of slides and photomicrographs presented this subject in an interesting manner. A new three quarter crown technique was given by Dr. C. T. Fleetwood, of Seattle, which was very helpful.

Dr. Harry S. Thomson, Field Secretary, Canadian Dental Hygiene Council, was the guest speaker at the banquet and gave an interesting talk on Public Health Dentistry

and possible trends in that connection.

The Annual Golf Tournament of the British Columbia Dental Association was held at the Royal Colwood Golf Club Saturday afternoon. Under the able guidance of Capt. W. J. Gibson there was a splendid turn out and the weather was perfect. Dr. A. McInnes, Victoria, captured the championship; Dr. D. Searle, Vancouver, runner up low gross; Dr. J. Chambers, New Westminster, low net; Dr. G. Snider, Vancouver, runner up low net; Dr. E. McDonald, best score 24 handicap; Dr. H. Clark, highest score; Dr. B. Nickells, runner up highest score; Dr. F. McAuley, Seattle, best score American guest; Dr. R. Stewart, Vancouver, best poker hand; Dr. A. J. Garesché, Victoria, best all-round Golf Sport.

Victoria Dental Society

These officers are entrusted with the affairs of the Victoria Dental Society for 1942-3.

President, Dr. J. F. Mercer; Pres.-elect, Dr. W. B. Milburn; Sec.-treas., Dr. W. A. McDonald; Executive committee: Drs. Frank H. Moore, H. R. Turner, J. Ewart Gee.

Three more Victoria dentists have recently joined the Canadian Dental Corps: Drs. J. C. Foote, A. G. Lough and H. M. Hare.

Dental Assistants' Association

The Victoria Dental Assistants' Association met with the British Columbia Dental Association in convention at the Empress Hotel, May 1-2.

Miss Ruby Donald who has been acting President of the Association for some time, presided at the business meetings and welcomed members from the Seattle and Vancouver Associations. Miss Peggy Fatt, the President, who was unable to attend, sent a letter of welcome to the Association, the visiting delegates and their guests. Miss Grace McDonald, president of the Vancouver Dental Assistants' Association, brought greetings from her group.

Dr. Henrietta Anderson was the guest speaker to the Association, and spoke on "Women's Work Today." Dr. Anderson dealt with her interesting and inspiring topic under three headings, "Service," "Success"

and "Sacrifice." Dinner was served in Spencer's Dining Room and at the afternoon session the Victoria Association put on a table clinic of "Helpful Hints," conducted by Mrs. Wynne Saunders and Miss Marjorie MacLennan.

Dr. J. C. Harding, of San Diego, California, guest speaker to the B.C. Dental Convention, lectured with demonstrations to the Victoria Association and delegates on Saturday morning.

During the afternoon a tea was enjoyed by thirty-three girls, at the Oak Bay Hotel, and later an evening entertainment for all dental assistants brought to a close a very successful and profitable convention.

ALBERTA:

Dr. Husband Honoured

Dr. C. D. Husband, of Red Deer, has been appointed Honorary Lecturer in Local Anaesthesia at the School of Dentistry, University of Alberta, in recognition of his contributions in the local anaesthesia field.

Accelerated Session In Dental School

Due to the serious shortage of graduate dentists, the Dental School at Edmonton commenced an accelerated session on June 1. This session will be completed towards the end of December. The following session commences on February 1, 1943, and will be completed about the end of August.

Edmonton Dental Nurses and Assistants

At the annual meeting of the Edmonton Dental Nurses' and Assistants' Association held on June 1, the following officers were elected: President, Miss Charlotte Steele; Vice-president, Mrs. L. D. Cherry; Secretary, Miss Maxine Maloney; Treasurer, Miss Barbara Forryan, Social Convener, Miss Beth Bawden.

Annual reports were read. The Treasurer outlined the donations for the Christmas hampers and the overseas War Fund. The dental nurses and assistants have affiliated with the Women's Auxiliary of the Dental Corps for their future war work. After the Secretary's report a presentation was made to Miss Barbara Chinneck, retiring President.

Calgary Dental Assistants

The final meeting for the term 1941-42 of the Calgary Dental Assistants' Association was held on June 8, at 6.15 p.m. Miss Jean Reid, Miss Mable Owen and Miss Irene Watts served refreshments. Miss Irene Watts, a June bride-elect, was presented with a small gift and the best wishes of the members. The business meeting followed during which Miss Myrtle MacIntosh, Secretary, gave a summary of the year's activities, and Miss Gwen Hiliard, Treasurer, gave the financial report for the year. Election of officers for the coming term was the highlight of the business meeting. Miss Vera White, very capable and popular Past President, was again elected to that office. The new Executive will consist of the following: Vice-president, Miss Dorothy Maxwell; Secretary, Miss Jean Reid; Treasurer, Miss Ethel Fisk; and Press Convener, Miss Joyce Locke. A vote of thanks was given to the retiring executive by Mrs. J. Hood, and the Association adjourned for July and August.

—M. G. AULD.

SASKATCHEWAN:

Saskatoon Dental Society

The Saskatoon Dental Society held regular monthly meetings during the 1941-42 season, which were found interesting and profitable, as is attested by the large number of members present at each meeting. The officers for the season included Dr. J. N. Papove, President; Dr. R. L. Toren, Vice-president, and Dr. F. R. Smith, Secretary-treasurer.

The guest speakers for the season were Mr. Rowlett, of London, England, representing the British Dental Association; Professor Larmour, of the University of Saskatchewan; Dr. A. Scharfe, of Saskatoon; Major A. Gregor Smith, Officer Commanding the C.D.C. in Military District 12, and Dr. F. E. Risdon, of the Dental Faculty, University of Toronto. The members of the C.D.C. stationed in Saskatoon were frequent visitors at these meetings, where they were warmly welcomed.

At the May meeting the following officers were elected for the 1942-43 season: President, Dr. R. L. Toren; Vice-president, Dr. F. R. Smith; Secretary-treasurer, Dr. L. D. Haselton.

Dr. J. A. Brass, of Yorkton, has been elected, by acclamation, to the Senate of the University of Saskatchewan for a two year term.

MANITOBA:

Manitoba Dental Association

On June 15, with our genial and versatile President, Dr. D. Garnet Leckie, presiding, the Association concluded its 46th annual gathering with a dinner followed by a business meeting in the Fort Garry Hotel, Winnipeg. The speech of the President, in declaring the Convention open and the introduction of the guest Clinician at the morning session, can only be described as a "Knockout." Nobody else could do it just like that.

Dr. Magnus A. Gerde, of Minneapolis, a member of the dental staff of the War Veterans Hospital, was the Clinician. His patients, being veterans of former wars, are of course at the age requiring full dentures. This has given Dr. Gerde an opportunity to try out various methods of producing dentures and the demonstration of conclusions arrived at with the sustained interest of his audience, which came back in the afternoon for a repetition of the morning presentation, is more eloquent of their appreciation than words. Dr. Gerde was ably assisted by his technician, Mr. Holden Siegert, also a member of the hospital staff.

At the evening business meeting reports were heard from Dr. A. E. Proctor and Dr. M. H. Garvin covering the recent meetings of the Dominion Dental Council and the Canadian Dental Association at Toronto. Perhaps the most important item on the agenda of the C.D.A. was Dental Health Legislation. A request had come from the Department of Pensions and National Health asking for a statement from the C.D.A. of the part that the dental profession was prepared to take in the preparation of Dental Health Legislation as a part of a proposed Act covering compulsory National Health Insurance. A committee of five was appointed by the House of Delegates to prepare a plan and after several days and nights concentrated effort succeeded in producing a plan satisfactory to the Delegates and favourably received this week by the Department of Pensions and National Health.

Annual Meeting

The annual meeting was held at the Faculty of Dentistry Building, on June 9, with the President, Miss Anna Lindsay, in the chair. Mrs. K. E. Greenwood reported that about \$457 had been collected for the Red Cross on tag day by the dental nurses.

After the annual reports were given Miss Gertrude Whitehead, convener of the nomination committee, presented the slate. Officers were elected as follows:

President, Miss Anna Lindsay; Vice-president, Miss Betty Broadrib; Recording Secretary, Miss Marjorie Jackson; Corresponding Secretary, Miss Genette Ball; Assistant Corresponding Secretary, Miss Doreen Klager; Treasurer, Miss Margaret Robinson; Committees: Entertainment, Miss Eleanor Mason; Welfare, Miss Eva Tutt; Membership, Luella Downing; Publicity, Miss Mariam Jennings; Advisory Board, Dean A. D. A. Mason, Dr. R. G. Ellis, and Dr. Frank Martin; Auditor, Mr. K. E. Greenwood.

OLGA GREENWOOD, *Publicity Convener.*

ONTARIO:

Dental Nurses' Alumnae Association of Canada

At the graduation exercises of the dental nurses at Convocation Hall on June 3, Miss Anna Lindsay, President of the Alumnae, presented to Miss Ruth Piers a crest ring, a prize given by the Alumnae for the highest standing in practical work.

After the graduation, members and friends gathered on the campus and guests included President H. J. Cody, Dean Arnold D. Mason, Lt.-Col. D. J. Ferguson, Lt.-Col. E. M. Wansbrough, Dr. Harvey Reid, Dr. D. W. Gullett, Dr. W. E. Willmott, Dr. R. G. Ellis, Dr. Frank Martin, Major J. A. Grant and Capt. A. J. Buchanan. The presentation of the Mobile Dental Clinic was made by the Alumnae President and received by Lt.-Col. Ferguson on behalf of the Canadian Dental Corps. This was purchased with money raised by the Alumnae during the past year. Corporal Dorothy Caldwell, a graduate dental nurse, was in attendance.

A dinner was given in honour of the graduating class at the Granite Club. Greetings were extended by the President. A toast to



Courtesy of The Globe and Mail, Toronto.

This Mobile Dental Clinic was presented to the Canadian Dental Corps on June 3 by the Dental Nurses' Alumnae Association of Canada. Lt.-Col. D. J. Ferguson, District Dental Officer of M. D. 2, accepted the Clinic.

Shown above during the presentation ceremony, left to right, are: Dr. H. J. Cody, President of the University of Toronto; Major Ferguson; Miss Anna Lindsay, President of the Dental Nurses' Alumnae Association, and Dr. Arnold D. Mason, Dean of the Faculty of Dentistry.

the graduating class was proposed by Miss Gwyn and responded to by the class President, Miss Erma McAuliffe. Miss Elsie Courtney proposed a toast to our Alma Mater with Miss Florence Peart responding. Miss Marion Gardhouse, winner of the membership campaign, was presented, by Miss Edith Brown, with a trophy donated by the President.

The trio from the Faculty of Dentistry, accompanied by Miss Mildred Brown, sang a group of songs and Miss Marjorie Jackson gave a piano selection.

A dance followed at the King Edward Hotel.

Public Dental Health Education

Another milestone in public dental health activity seems to have been passed during the recent Ontario Dental convention. A new organization sprang into being—"The Public Dental Health Council of Ontario." This Council is comprised of representatives of various dental societies in Ontario and plans to meet annually at the time of the Ontario Dental Association convention. The purpose

of the Council is to co-relate public dental health education activity throughout the entire province—first among members of the dental profession themselves, and second to co-operate with other health workers and educationists in disseminating dental health education. For a long time many dental health workers have felt a need for just such an organization as this, to give a common direction to promotion of dental health education to fellow members of our profession. Too often dentists are asked to undertake a specific educational task or to inaugurate a dental service of some sort and they are at a loss to know just how to meet the situation. Consequently a new pattern of service may be set up without the full advantage of knowing what experience has proven to be most practical and successful. It is hoped the new Council will provide an opportunity for free discussion of problems relating to public dental health education and service so that the most suitable programs will be evolved.

In Ontario, the Ontario Dental Association has an elected Public Dental Health Com-

mittee of six members. This group of men acts as a public relations committee for the Association and their activities are financed by it. The new Council, recently formed, agreed that the present existing Ontario committee shall act as the executive body of the Council and direct educational effort, plan convention programs, etc. The committee for some time past has worked in co-operation with the Board of the Royal College of Dental Surgeons, the Faculty of Dentistry and the Director of Dental Services of the provincial government of Ontario. Of course in co-operating with the Director of Dental Services, this committee through him, has contacts with public medical services, public nursing services and with the teaching profession through the Department of Education. These contacts are very valuable in planning a program of activity because the efforts of all parties are given proper prominence and are suitably co-ordinated.

The new Council of Public Dental Health in Ontario has just been born. If the youngster is to grow up and be useful, it must be nurtured along until it proves to be worth while. Many helpful comments have been sent in already. This is the sort of interest that your executive wishes to know about.

The members of the Executive Committee follow: T. R. Marshall, Chairman; A. E. Higgins, Secretary; Herbert Reid, Own Yule, Ross Thomas and R. P. Lowery.

War Work Report of the Patriotic Donators and Knitters Club of the Ontario Dental Nurses' and Assistants' Association

In accordance with war regulations, the ten chapters of the Ontario Dental Nurses' and Assistants' Association have been affiliated with the Patriotic Donators and Knitters Club. It is, therefore, with very sincere appreciation of the co-operation given me by the chapter war conveners and members that I give you the chartered and audited figures covering the period since the outbreak of hostilities, when the Club was formed.

Monies made and donated	\$1525.23
Utility bags donated	1000
Bibles donated	300
Wool purchased, lbs.	629
Value of wool	\$ 944.00
Comforts knitted by members and friends	1850
Hand made quilts for bombed victims	4
Soap, razors, toothbrushes, mirrors, Kleenex, and personal items	3500

240 parcels reached England safely. Each parcel weighed approximately 10 pounds.

Several hundred letters of appreciation have been received from servicemen in England.

Parcels for the officers and men of the Canadian Dental Corps Overseas were sent direct to the Officer Commanding in each of the seven Dental Corps Companies Overseas. All other parcels were sent to the Ex-Canadian Servicemen's Association in London, England, where the Ladies' Auxiliary in Gower Street has been doing such a wonderful job of distributing our comforts to our Canadians in uniform. As a mark of appreciation to the ladies, our Club arranged a shower of gifts which included items now considered a luxury in England—soap, pins, thread, mending wool, powder, and incidentals which numbered over 300 items.

Our parcels have all been acknowledged by cable, and letters have been received from the bombed families acknowledging the gifts of quilts.

The retail valuation of our gifts to the Canadian Armed Forces is approximately nine thousand dollars.

(Signed) LETA B. BLABER,
Provincial War Convener.

Ontario Dental Nurses' and Assistants' Association

ELEVENTH ANNUAL CONVENTION

"Service" was the theme of the Eleventh Annual Convention of the Ontario Dental Nurses' and Assistants' Association, which opened on Sunday, May 17th, at the Royal York Hotel, Toronto. President Tomye Turner of Toronto, assisted by Convention Chairman, Dorothy Scott of Windsor, and Convention Hostesses, Anna Lindsay of Toronto, Isobel Scott of London, and Jean Dalglish of Hamilton, welcomed members from all parts of the Province and guests from the United States and Winnipeg.

Fifteen table clinics, each reflecting great individuality, were presented all day Monday by nurses and assistants in the spacious ballroom of the hotel. Three Toronto members won the first three awards. Arlene Creeny led with her clinic on "Correspondence", Ilean Checkley came second with her clinic on "X-Ray Processing Problems", and Lura Edwards

won third prize for her clinic on "Sterile Technique and Assistance in Oral Surgery".

The poster contest on the subject, "The Dental Assistant on His Majesty's Service" was won by Mura Dunn of Hamilton; the burr guessing contest was won by Helen Oldham of Toronto.

The social high-light of convention was the annual banquet on Monday night in the Oak Room of Union Station. A complete miniature circus, with clowns and animals, balloons, popcorn and peanuts, created a real circus atmosphere. Mr. Frank Dowsett, guest speaker, made a strong impression with his stimulating address, "Let's Use The Explorer". Mr. Dowsett listed the four mental saboteurs—mental confusion, contradiction of feeling, indecision, and panic, and told colourful stories of heroism in the present war.

Another delightful function of the convention was the luncheon held in the patriotically decorated Roof Garden. Miss Gertrude Rutherford, Principal of United Church Training School, speaking on "Women Must Serve For Victory", challenged for an all-out service effort, whose ultimate aim is not only a victory of arms, but also a better social order in the world.

Dr. A.D.A. Mason, Dean of the Faculty of Dentistry, University of Toronto, officially opened the convention on Tuesday morning, and the Reverend Peter Bryce, D.D., Minister of Metropolitan Church, Toronto, pronounced the invocation.

Among the many fine speakers on Tuesday, Wednesday, and Thursday, were Dr. E. A. Grant, President of the Ontario Dental Association, Dr. S. Lee Honey, Vice-President, Dr. Fulton Risdon and Dr. I. H. Ante of Toronto, Dr. S. P. Greaves and Dr. S. Sorrin of New York City, Dr. D. A. Campbell of London, Ontario, Dr. L. I. Grossman of the University of Pennsylvania, Dr. O. B. Markey of Western Reserve University, Cleveland, Ohio, Dr. J. H.

Moyle of Brantford, Ontario, and Dr. W. H. Crawford, Dean of the School of Dentistry, University of Indiana.

Miss Jean Gordon, President of the Winnipeg Dental Nurses' and Assistants' Association and representative of the Western Canada Association brought greetings from the West. Mildred Stevenson, President of the American Dental Assistants' Association, gave an excellent paper entitled, "Why Organization".

At the business meeting on Wednesday afternoon, the following officers were returned by acclamation: Tomye Turner, President; Loretta McCaughey, President-Elect; Marjorie Crees, Vice-President; Isobel Scott, Recording Secretary; Helen Campbell, Corresponding Secretary; Anna Lindsay, Treasurer, and Marion Edwards, Archivist.

Dorothy Scott of Windsor, Installing Officer, assisted by Ina Leikas of Sudbury, Conducting Officer, were in charge of the beautiful installation service at which the new executive was inducted into office, and which brought to a close a most successful four-day meeting.

FERNA LEECH COOK, *Publicity Convener.*

QUEBEC:

Montreal Dental Club

The last general meeting of the Montreal Dental Club was held on May 11 in the Club Rooms. The speaker of the evening was Dr. John Gerrie, B.A., D.D.S., M.D., who spoke on "Wartime Surgery of the Face." He very ably covered the new developments in surgery of the face including some new methods of fracture fixation and surgery for surgical prosthesis. Dr. Gerrie is one of the members of the Club who recently returned from England where he served as Major with the R.C.A.M.C. attached to No. 1 General Hospital.

EMPIRE NEWS

GREAT BRITAIN:

Another American Gift

American generosity to Britain is continually finding expression in some new direction. A recent gift is a grant of nearly £8,000 to aid

Channel Islanders now in this country. Some nine thousand of these refugees are children under 16, and a large part of the grant has been set aside for dental treatment for them. —*D. Mag. & Oral Topics, April, 1942.*

GENERAL NEWS

Dominion Dental Council Examination Results

The following is a list of successful candidates at the recent Dominion Dental Council examination: Doctors C. Ames, A. D. Baker, A. H. Ball, J. G. Biglow, R. H. Bingham, R. O. Brett, R. H. Burgmon, W. S. Chu, W. R. Clark, F. S. Cleall, G. H. Craig, G. A. Delagron, R. E. Dickson, M. A. Du Mont, B. J. Eastwood, H. S. A. Fleming, S. Gelfand, H. B. Johnson, D. C. McKecknie, J. D. McLean, M. M. Mickelson, V. M. Mickerson, D. Mintz, J. H. Mullett, A. W. O'Hara, P. C. Outhouse, A. L. Pasel, W. J. Shaffner, Wm. R. Upton, J. R. Vaughan, G. C. Walkey, S. G. Werry, W. S. Woolcott, O. F. Wright.

A. J. BRETT, *Sec.treas.*

Fluorine Study

Dr. Wallace D. Armstrong of the research department of the School of Dentistry, University of Minnesota, and Dr. John W. Knutson, acting for the Minnesota Department of Health and the United States Public Health Service, are conducting an experimental study on the topical application of sodium fluoride. The solution will be applied to the permanent teeth of school children in various grades with the anticipation that the teeth will absorb some of the fluorine and act as a protecting agent against dental caries. The applications will be made twice a week for a period of eight weeks on about 300 school children in North Mankato, Arlington, and Saint Louis Park. Dr. Knutson will apply the solution to the children's teeth and make the clinical and statistical study.—*North-West Dentistry*, April, 1942.

A Woman Dentist as a Spy

An instance of the manner in which all sections of the community in Russia co-operate to defeat the common enemy, which will be of special interest to the profession, is given in a despatch from Reuter's correspondent in Moscow quoted by the *Daily Herald*. A guerrilla band led by a school teacher had as a scout a woman dentist, who also acted as doctor to the band. Concealing the fact that she knew German well she went into villages occupied by

the enemy and talked and ate with the Germans, and was thus able to bring back valuable news to the band, which in the course of its operations killed 500 Germans and wrecked a large number of vehicles.—*Br. D. Jour.*, March 16, 1942.

Dentistry in Germany

Toothaches are becoming widespread in Germany, according to an Associated Press dispatch, since "there simply are not enough dentists." The German people are asked to be patient and consult their dentists only when it is absolutely necessary.—*N.Y. Jour. of Dentistry*.

National Income in U.S.A.

The total national income for 1941 was estimated at \$92,200,000,000. The latest Census Bureau estimates place the country's population at 133,000,000.

Dental X-Rays to Combat Delays on Defense Work

Plans have been made by the Woodward Governor Company and the Winnebago County (Wis.) Dental Society for dental x-rays of all employees of the company, a defense industry. The program is designed to reduce delays through illness. X-rays will be turned over to the workers' dentists, with complete diagnosis.—*Chicago Tribune*, March 19, 1942; *per A.D.A. Release*.

Generous Donations by Kellogg Foundation

The W. K. Kellogg Foundation of Battle Creek, Michigan, has been studying the problem created by the accelerated educational program of medical and dental schools as it affects the students of limited means. It was found that many students were faced with the making of decisions within a few weeks or even within a few days, decisions which would be a matter of great importance in our war effort since it is essential that the stream of professional men in training be maintained.

The Foundation, therefore, has donated a sum of one million and a half dollars to be granted to nearly 150 schools of medicine,

dentistry, public health and nursing in the United States and Canada in sums of \$10,000 each to be used for loans and scholarships for students.

Funds granted by the Foundation under this plan will be in the nature of a gift to the school and will not be returned, thus permitting of a setting up of a revolving fund in each institution. While the matter of scholarship is being left entirely in the hands of the school it is understood that loans will be granted on the basis of scholastic ability, character and need in comparison with other applicants. In the case of the dental profession as with others, it is the hope that money so used will be chiefly for the purpose of encouraging exceptional students otherwise unable to enter the professional field. The only restriction is that scholarships should not amount to more than \$500 to any student in any year. If interest is to be charged it should not exceed 2½% per annum.

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Dental Hygiene Institute of Chicago

In a report before the Public Relations Commission on May 4, William B. Pringle, Educational Director of the Institute, pointed out how numerous showings of the motion picture, "About Faces," have been made before lay groups; that the Institute has in production its own sound-slide film, to be called "The Keys to Health and Happiness" and for which bookings are already being made; that a number of industrial house organ publications are taking publicity material on a regular basis; that three radio broadcasts on sustaining time, with scripts prepared by the Institute, have been made; that a successful trial operation of the industrial diagnostic service has been completed; and that a regular column is in the process of syndication among community newspapers in the Chicago area.—*Fortnightly Review, Chi. D. Soc., May 15, 1942.*

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Dedication of the Technological Institute of Northwestern University

Northwestern University dedicated on June 15 and 16 its new Technological Institute, built at a cost of \$6,735,000.

Among the facilities in the new building are an artificial river for testing ship models

and wave action; a 1,500,000-volt surge generator; cold rooms for research at extremely low temperatures; a 1,000,000-pound transverse-universal testing machine two and a half stories high; the quietest room in the world; an explosion-proof room for the study of gases under high pressure; and a 5,000,000-pound hydraulic testing machine. More than \$1,000,000 worth of equipment is already in use for teaching and research. Adequate room for expansion has been allowed in all departments.

When it is fully under way it will have an enrolment of 900 men, all pursuing a five-year co-operative course which calls for alternating a three-month period of study in the classroom with an equal period of work in industry. This plan is designed to train the student in practical as well as theoretical engineering; to assist industry in training its future executives, and to assist boys with limited means to gain technical education.—*Science, May 22, 1942.*

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Dental Unit for the Anzacs

A mobile dental unit has been purchased at a cost of \$8,000 by members of the dental profession in the U.S.A. for their brother dental officers of the Fighting Anzacs. A cable from Cairo announces its safe arrival in the Middle East.

The unit consists of a twelve-ton truck into which are built benches, foot lathes and equipment for prosthetic dentistry, foot engine and a chair with surgical and general operative kit. A large quantity of materials for field dentistry, such as teeth, plaster, wax, filling materials and accessories were securely packed and were donated by the dental trade firms of the U.S.A.—*Jour. of A.D.A.*

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National Dental Aid in Sweden

During the 1935 session of the Swedish Riksdag a decision was made to introduce a State-organized system of national dental aid. The scheme is now being organized throughout the country. When it is complete it is estimated, according to a report in the Glasgow Herald, that employment will be given to about 2,500 persons, about 1,000 of them being dental surgeons.—*D. Mag. & Oral Topics, April, 1942.*

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

Professor W. H. Gilmour, LL.D. M.D.S., L.D.S., of England, aged 72, died April 6. He did much to extend the usefulness of Liverpool Dental Hospital both as a training centre and as a health agency. He was the first full-time professor of dental surgery in Britain and was appointed a member of the first dental board of the United Kingdom, when it came into being after the passing of the 1921 Act.

Professor Gilmour travelled widely and had many friends in all parts of the world, including Canada.

C. F. Rilot, M.R.C.S., L.R.C.P., L.D.S. (Eng.), of England, aged 78, died in April. He took a prominent part in the administration of dental benefit under the National Health Insurance Acts and was associated with the Royal Dental Hospital of London for more than 50 years. He was President of the British Dental Association in 1918 and rendered outstanding service to this organization.

Lloyd A. Jacques, of Oakville, Ontario, aged 43, died June 8 following a heart attack. He was graduated from the R.C.D.S. of Ontario in 1922. He was a member of Knox Presbyterian Church and director of Oakville Lions Club and a Mason. He was a member of the Hamilton Dental Academy. While a dental student in 1918 he served with the Canadian Dental Corps.

Dr. Jacques is survived by his widow, one son and one daughter, a brother and a sister.

John P. Buckley, of Los Angeles, aged 68, died May 14. He was a dental instructor in Chicago before moving to California in 1919. He was a former president of the American Dental Association and was widely known throughout Canada.

Donald H. Beaton, of Toronto, Ontario, aged 67, died at Orillia on June 3.

Dr. Beaton was born at Stayner, Ontario, and received his early education at Orillia. He was graduated from the Royal College of Dental Surgeons in 1898. He practised in Midland for some years, later coming to

Toronto, where he conducted a dental practice for 25 years. He retired in 1932.

He was a member of the Presbyterian Church.

Dr. Beaton is survived by one brother and three sisters.

Joseph William Earl Brown, of Caledonia, Ontario, died suddenly, May 20. He is believed to have slipped off a rock while fishing near a railway bridge.

He was graduated from the Royal College of Dental Surgeons in 1916 and immediately took up practice in Caledonia.

Dr. Brown is survived by his wife, his mother, Mrs. W. Brown, and a brother and sister.

Roderick R. Ross, of Seaforth, Ontario, aged 81, died early in June. He spent several years as a teacher before graduating from the R.C.D.S. of Ontario.

He was a member of the Seaforth Collegiate Board and the First Presbyterian Church. He was an ardent bowler and belonged to the Seaforth Lawn Bowling Club.

Dr. Ross is survived by his widow and one daughter.

Rupert H. Cosgrove, of Ottawa, Ontario, aged 57, died June 5. He was graduated from the R.C.D.S. of Ontario in 1909 and soon after opened his office in Ottawa.

He was a member of St. Joseph's Church.

Dr. Cosgrove is survived by his widow, two sons, three daughters, one brother, four sisters, and four grandchildren.

Wilfred P. Harvey, of Calgary, Alberta, aged 64, died June 4. He was graduated from the R.C.D.S. of Ontario in 1900. In 1917 he went to Calgary and accepted a post with the public school clinic until 1919, when he opened his own office. He had practised previously in Lucan and Rodney, Ontario, and Canora and Regina, Saskatchewan. He was a member of the Calgary Dental Society and the Christians' Meeting Gospel Hall.

Dr. Harvey is survived by his widow, three daughters, a sister, three brothers and three grandchildren.

. . . SECTION FRANÇAISE . . .

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Assistant

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516 est, rue Sherbrooke, Montréal, Québec

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Ce Qui Vient . . .

Quand nous goûterons les fruits amers de l'arbre que nous avons laissé croître; grimaces et remords seront vains si nous ne cherchons pas à comprendre la cause du mal qui nous ronge et les moyens de nous en délivrer. De tous temps et dans tous les pays, il s'est trouvé des hommes avides de justice pour avertir leurs compatriotes de la nécessité de mettre fin à certains abus; toujours et partout on a vu des aveugles obstinés les calomnier, les mépriser, jusqu'au jour où broyés par les châtements dus à leur courte vue ils se sont écrié, mais trop tard: Si nous avions su.

Le docteur Philippe Hamel, l'automne et l'hiver derniers, a donné des conférences à ses confrères de Sherbrooke, Montréal et Québec, pour leur expliquer certaines erreurs de notre régime économique.

Au cours des mois prochains, nous publierons, par tranches, ce travail que le docteur Hamel a bien voulu retoucher spécialement pour notre revue.

Les idées émises par le docteur Hamel en surprendront peut-être plusieurs. Toutefois, qu'on ne les boude pas trop vite. Elles sont le fruit de longues études et de patientes observations. Elles méritent, au moins, d'être étudiées. On aurait tort de les condamner "prima facie".

Le docteur Hamel a, pour faciliter son travail, une précieuse documentation, comme l'attestent ses nombreuses références.

Nous ne pouvons plus longtemps nous désintéresser des problèmes économiques. Nous glissons visiblement vers le socialisme. Il importe de connaître ce qui nous y conduit et surtout ce qui pourrait nous en éloigner. Le docteur Hamel apporte sa collaboration.

La Rédaction.

La Dentisterie d'Etat s'annonce pour nous

Conséquence inéluctable des profondes erreurs dans notre régime économique

Nous nous acheminons rapidement vers la dentisterie d'Etat. Avec un régime économique comme celui sous lequel nous vivons, la nationalisation des professions s'impose depuis déjà assez longtemps. C'est précisément parce que j'appréhendais, pour nous et pour le public lui-même, cette issue fatale, qu'au mois d'août 1932, à une Convention où étaient réunis les représentants de l'Association dentaire britannique, de l'Association dentaire canadienne et de l'Association dentaire de l'Ontario, je m'exprimais ainsi :

THE FUTURE OF DENTISTRY IN CANADA—THREAT OF STATE DENTISTRY

"I wish to be concise for I fully realize your attention is being taxed almost to the limit by so many lectures, clinics and speeches, however interesting and necessary they may be. But allow me to say briefly a few words on the future of dentistry in our country. Our profession reflects every sign of abundant scientific progress. Universities are gradually filling many desiderata. Research work has been intensively pursued by highly cultured scientists. Ethics are satisfactorily observed. In a word, dentistry in Canada is perfectly healthy from an inside viewpoint. With such constant advancement, we have felt confident that our duty was fulfilled entirely, and because we, professionals, have remained somewhat indifferent to political and social economy, walling ourselves in the immediate and direct study and practice of our art—(cannot this be applied to members of mostly all professions)—we have allowed our economic system to be fully disorganized. We awaken ourselves to-day to the fact that unscrupulous financial men have so construed our economic system that the savings of this generation has been pilfered. Our laws have either loop-holes for legalized plunders or have been openly prepared to satisfy the wishes of famed schemers. With an entire security, stock jobbers, company promoters have penalized for years to come the thrifty, the hardworkers, those who hoped to see old age come, without being a burden to society and being driven to the poor house.

"Gentlemen, I understand I am opening a subject on which one could easily talk for an hour or two. I will not bore you any longer at this late hour. I just wish to impress upon you that unless we, professionals, create and guide a strong public opinion for a revision of the laws ruling finance in all its different activities, we shall be confronted shortly with this problem: (notwithstanding the ultimate threat of social disorders): Professionals will have a potential clientèle eager for their services, because educated to their importance and value, but unable to pay the lowest fees. This will create a public opinion for state ownership of professions which will eventually prove disastrous to all. Sound reasoning, study and scientific progress speak little to the starving professionals, therefore they themselves, supported by a numerous pauperized population, will necessarily induce the governments to control dentistry.

PREVENTIVES

—"The immediate preventives against this undesirable social transformation which might become a necessity, would be more righteous in finance; a more effective protection for the small investor who remains after all one of the best guarantees for social stability; a destruction of organized trusts controlling necessities of life, because they constitute one of the worst forms of centralisation of wealth; a dissolution of all holding companies which allow men of selfish idealism to control many organizations without risking a cent of their own money and to dictate even to our governments.

"Dentistry and other liberal professions cannot continue their amazing developments in a distressed world. Statesmen, to-day, have mammoth tasks to perform and

remain unable to solve every problem, unless men of high education, our elite, concentrate a part of their activities to solve the problem of reconstruction by forming and guiding a sane public opinion. And this is all the more urgent when our politicians are besieged by the very ones who are most interested in maintaining intact this economic structure based, I will admit, on a sound principle, the right of property, but so construed as to depose a knife-grinder to the advantage of a multimillionnaire.

"Gentlemen, I am through. I have but scratched the surface of this subject. However, I remain hopeful that these ideas may meet, without any further argument, the views of a good many amongst you.

"We have come to this convention to improve dentistry for the sake of humanity and for our own satisfaction, and this desired improvement may be transformed into retrogression, many fear, if all professional men do not insist individually and as groups for the enforcement of laws and regulations which shall bring to an end this wholesale pillage of a population by a handful of shameless financial dictators."

Mon discours prononcé, plusieurs se sont demandé les raisons de cet apparent pessimisme; d'autres, plus entraînés à la réflexion, m'avaient jugé moins sévèrement; quelques-uns, enfin, avaient daigné m'approuver.

L'année suivante, le 20 mars 1933, après sept mois de correspondance avec les représentants de l'A. C. D. et des divers Collèges dentaires provinciaux, j'écrivais,—comme président de l'Association dentaire canadienne,—à l'Honorable R. B. Bennett alors Premier Ministre du Canada, et lui communiquais la Résolution suivante:

"WHEREAS the present economic crisis has afforded a special occasion for examination and criticism of the existing economic structure upon which some of our Canadian institutions have been built;

"WHEREAS numerous complaints arising from many points of Canada against the laws regulating the promotion of companies, the modifications of the capitalization of existing organizations, the trustees supervising the interests of bondholders, etc., give rise to the belief that there is room for needed corrections in our present financial structure;

"WHEREAS the Canadian Dental Association, being desirous of helping and supporting our statesmen in their attempts to apply the remedy to one of the important causes of this economic crisis; and further, being desirous of removing, or nullifying the arguments of those who wish the destruction of the capitalistic regime, arguments which at the present time strengthen dangerously some appeals to the population of Canada for a radical change, therefore be it

"RESOLVED that because we do not wish to see a regime, sound in its source and principles, tend to eventually vanish away in almost general disapprobation, the Canadian Dental Association does herewith suggest to the Government of Canada the desirability of creating a NATIONAL COMMISSION composed of economists, jurists and professional men, not connected with politics or any important financial group, for the purpose of investigating our present economic structure, with the end in view of recommending to Parliament the necessary changes for the removal of whatever is vitiated.

THE CANADIAN DENTAL ASSOCIATION.

"The idea of suggesting to the Federal Government the formation of a National Board, to which would be intrusted the duty of indicating the necessary means to bring an end to the evident abuses now prevailing in finance, has also received the entire approval of the professional associations hereafter mentioned:

The ONTARIO Dental Association;

The College of Dental Surgeons of the Province of QUEBEC;

The Provincial Dental Board of NOVA SCOTIA;

The College of Dental Surgeons of BRITISH COLUMBIA;
The ALBERTA Dental Association;
The Council of Dental Surgeons of NEW BRUNSWICK;
The College of Dental Surgeons of SASKATCHEWAN;
The Dental Association of PRINCE EDWARD ISLAND.

"This move of our Association is inspired by no other motive but that of endeavouring to help our leaders in their strenuous efforts to right the actual distressing economic conditions of our country, and we sincerely hope our suggestion will meet with your views and those of your distinguished colleagues".

Pray accept, Honourable Sir, the respectful regards of

Yours sincerely,

(Signed) PHILIPPE HAMEL

President of the Canadian Dental Association.

Les chefs de la profession dentaire au Canada ont donc fait tout en leur pouvoir pour éviter la socialisation des carrières libérales. Mais ne l'oublions pas, la socialisation devient inévitable dans un pays civilisé, lorsque la majorité des chefs de famille ne gagnent pas suffisamment pour même subvenir au coût de la nourriture, du vêtement et du logis.

Chez nous, avec une économie aussi faussée que la nôtre, la dentisterie d'Etat apparaît à la majorité comme un moindre mal. A moins de profondes modifications apportées à notre régime, elle devient inéluctable. C'est la route ouverte au socialisme. Il ne faut pas s'en étonner, notre régime économique nous y conduit.

La législation de la dentisterie d'Etat est en voie de préparation à Ottawa.

Ce nouveau régime, au début, fonctionnera probablement à merveille. Le peuple se demandera pourquoi un tel avantage social ne lui a pas été accordé plus tôt. Seulement, au cours des ans, une fois l'émulation, le stimulant disparus chez le professionnel, nous constaterons forcément une régression marquée dans la valeur de ses services. Rien ne changera notre pauvre nature humaine. Faites disparaître l'initiative personnelle chez le dentiste, éliminez la concurrence, immédiatement le besoin d'être à la page dans ses connaissances s'atténue ou disparaît chez lui. Il se rouille, s'enlise dans la routine, dans le "rondcuirisme". Pour ces raisons et bien d'autres, la société se lassera de la dentisterie d'Etat et cherchera à s'en débarrasser. Il lui faudra alors retourner au point de départ et se donner, cette fois, un régime économique qui permettra au chef de famille de toucher un salaire suffisant pour se subvenir à lui-même et à sa famille. Alors comprendra-t-on qu'il faut à une société qui se dit chrétienne, un régime où l'usure, la cupidité ne régneront plus en maîtres, un régime où le juste prix pour toute chose deviendra une réalité.

NOTRE PAUVRETE—Les causes de notre pauvreté remontent bien loin dans notre histoire. L'indigence a été notre compagne fidèle depuis les débuts de la colonie. La conquête n'a fait que l'accentuer.

Ne renottons pas toutefois les causes anciennes. Leurs effets ont surtout atteint nos ascendants. Elles appartiennent à l'histoire, au passé. Regardons le présent et surtout l'avenir. Aujourd'hui, la pauvreté a fait place à un paupérisme sans cesse croissant. La misère règne au milieu de l'abondance. Quel paradoxe! Nous devenons une masse de prolétaires au milieu de la grande richesse. A ce mal, il est des raisons. Il importe de les étudier. Nous ne pouvons permettre à la richesse de se centraliser indéfiniment. Il faut y mettre un terme, et pour cela nous devons rechercher les causes de cette anomalie. Pour guérir d'une maladie, tous en conviennent, il importe d'en bien connaître la nature, les origines, les causes.

LA GUERRE ET LA PROSPERITE—En temps de guerre, tout va à merveille. Le chômage se trouve réduit au minimum. L'argent circule abondamment. Jusqu'à cette année, l'industrie du bâtiment avait augmenté d'activité: indice de prospérité;

la grande et la petite industrie travaillaient à leur plein rendement; le commerce de gros et de détail étaient florissants.

Cette prospérité temporaire et factice, nous la devons au conflit mondial, tous l'admettent. L'explication en est facile: l'industrie de guerre distribue des salaires élevés et abondants; l'armée fait de même. Tout cet argent peut servir à l'achat de nécessités de la vie ou d'objets de luxe, puisque la production de guerre ne requiert pas, comme les autres productions, d'être achetée par les contribuables. La carence de monnaie—mal habituel dans les rangs des consommateurs—, se trouve ainsi effacée par l'introduction dans la circulation monétaire, de fortes sommes d'argent supplémentaires.

Si la production de guerre devait être mise en vente chez le peuple, tout comme les autres produits de l'industrie, l'argent en circulation serait de nouveau insuffisant pour l'achat de la production. Il y aurait mévente d'une importante partie de la production de toutes les industries. Une forte partie de l'argent qui, aujourd'hui, se dirige vers les biens de consommation, serait utilisé pour l'achat des produits des industries de guerre, et la prospérité présente n'existerait pas. La crise serait nécessairement plus aiguë qu'avant le conflit.

La guerre est donc venue injecter, dans le domaine de la consommation, l'argent qui habituellement y manque pour le fonctionnement normal de notre régime économique défectueux, voire même faux. Des pompes aspirantes retirent à jets continus l'argent des masses pour les appauvrir de plus en plus.

LA GUERRE FAVORISE LA CENTRALISATION DE LA RICHESSE—Les hostilités, tout en nous donnant une prospérité factice qui prendra peut-être fin dès 1942, favorisent malheureusement la centralisation de la richesse que la crise économique de 1929 avait déjà fort accentuée.

Les gouvernants, pour obtenir, une production rapide, se tournent naturellement vers la grande industrie et lui cèdent la large part des contrats importants. Sur un continent infesté de monopoles de toutes sortes comme le nôtre, les États, en temps de guerre, se voient contraints de s'adresser à ces monopoles pour la confection rapide et abondante du matériel de guerre.—Comme résultat inévitable, vous obtenez une plus forte concentration de la puissance économique. Cette accumulation de richesses en quelques mains s'opère, en dépit du lourd fardeau des taxes qui pèse sur toutes les organisations économiques du pays.

Ce mal, fatalement accru par la guerre, aurait dû être combattu durant les années de paix. Les gouvernants ne l'ont pas voulu ou n'ont pas compris sa menace pour la démocratie. Il importe maintenant de préparer des correctifs efficaces et rapides pour l'après-guerre.

LA CONCENTRATION DE LA PUISSANCE ECONOMIQUE — Dans son aveuglement la ploutocratie a cru pouvoir indéfiniment sacrifier les intérêts du peuple pour se gaver à sa guise. Elle a oublié que des lois invincibles ramènent finalement tout à la Justice et se vengent cruellement, tôt ou tard, des iniquités perpétrées contre les faibles, les moins instruits, les prolétaires.

La concentration de la puissance économique, est un défi à la démocratie. Elle présente un problème dont la solution demande l'attention immédiate des autorités, pour l'après-guerre.

Aux Etats-Unis (1), en 1929, 3/10 de 1% de la population ont reçu 78% des dividendes payés par les entreprises. C'est tout comme si, sur chaque 300 personnes de la population, une recevait \$78.00 sur chaque \$100. versé en dividendes, alors que les 299 autres auraient à se partager les \$22, autres piastres. Pis encore, moins que 5% de ces 299 malheureux absorbent très probablement ces \$22. et laissent les autres hors concours.

(1) Final Report & Recommendations of the T.N.E.C., p. 11. Washington. 1941.

En 1935, aux Etats-Unis, 1/10 de 1% des entreprises à fonds social possédaient 52% de l'actif de toutes les entreprises. Moins que 5% des compagnies possédaient 78% de l'actif de toutes les entreprises.

Au Canada, la situation est pire (2). Près de 90% de nos familles ne gagnent pas \$1,000. par année, et 15% seulement touchent plus de \$5,000. par année.

Aux Etats-Unis (3), 47% des familles gagnent moins que \$1,000.

Les démocraties sont plus menacées dans leur existence par cette concentration économique que par leurs propres défauts.

Les entreprises privées ont cessé d'être des entreprises libres. Elles ont pris une forme de collectivisme non pas d'Etat mais d'intérêts privés. Le collectivisme d'intérêts privés conduit au collectivisme d'Etat.⁴

On a voulu du monopole partout. On a voulu mettre fin à toute concurrence, en éliminant les faibles par les moyens les plus malhonnêtes.

On a voulu toutes les richesses pour une classe de privilégiés. Les petits, dans le commerce et l'industrie, devaient disparaître. La terre appartenait désormais aux plus forts, aux ogres, aux gloutons. Le monde, avec ses richesses inépuisables, avait été créé pour des Rostchild, des Sassoons, des Rockefeller, des Mellon, et leurs rares associés.

Aujourd'hui, l'homme ne se mesure plus avec son semblable; il lui faut lutter contre des géants. A une lutte où l'échec lui paraît inévitable, il préfère la passivité. Il attend, chôme, récrimine, cherche en vain une solution quand il ne croit pas la trouver dans les idées subversives.

La majorité des grandes fortunes, selon l'enquête de Washington sur la concentration de la puissance économique, proviennent d'abus de monopoles.⁽⁵⁾

Karl Marx disait: "La propriété, c'est le vol". Et Mgr. Ketteler, Evêque de Mayence, répondait: "Karl Marx énonce là un faux principe, mais malheureusement il est vrai que la propriété bien souvent est le fruit du vol".—

L'ordre, selon les monopoleurs, consiste à tout laisser aux mains d'un petit groupe, sous prétexte de protéger la propriété privée. Les autres, les dépossédés doivent se contenter du rôle de parias, d'esclaves, dans ce prétendu ordre contemporain édifié selon le concept inique des puissants.

Les monopoles centralisent la richesse, 1o—en exigeant des prix excessifs pour des nécessités de la vie moderne; d'où profits usuraires qu'ils dissimulent en versant des dividendes sur des capitaux artificiels; 2o.—en payant des prix abusifs pour des matières premières ou autres fournies par des filiales dans lesquelles seuls sont intéressés quelques privilégiés; 3o.—en versant des jetons de présence à des directeurs aussi inutiles que nombreux; en rémunérant démesurément leurs officiers supérieurs. En certains cas, on a versé jusqu'à \$412,860, à un président de compagnie.⁽⁶⁾

L'égoïsme, la cupidité, l'aveuglement des rois de la finance nous valent d'assister, depuis 1929, à l'agonie de ce régime ploutocratique. Les grandes convulsions s'annoncent déjà. Tous, nous en souffrirons. Nous avons vécu trop longtemps avec du diachylon sur les yeux. Les favoris de ce régime nous prévenaient de ne pas l'enlever, de crainte que la lumière ne nous causât un mal irréparable. A leur avis, il

(2) Annuaire du Canada 1938, p. 938.

Annuaire du Canada 1941, pp. 771, 776, 774.

(3) Final Report & Recommendations of the T.N.E.C., p. 12.
Investigation of Concentration of Economic Power.

(4) Ibid. p. 12.

(5) Investigation of Concentration of Economic Power, Monograph no. 4, p. 1.

(6) International Harvester—Alexander Legge, Président, a reçu:

en 1927 \$353,386.,

en 1928 405,909.,

en 1929 412,860.

Investigation of Concentration of Economic Power, Part 31, p. 17949.

valait mieux nous tenir dans l'ignorance. Les problèmes de la finance, les dessous du régime économique offraient trop de points compliqués, prétendait-on, pour qu'on fût justifiable de nous les expliquer.

Comme on voulait, en certains collèges, initier la jeunesse à l'étude de notre système bancaire, un trustard de race, un pur sang celui-là, s'est présenté auprès d'un Supérieur pour lui reprocher l'enseignement de ces questions de finance trop complexes pour des cerveaux en voie de formation, prétendait-il.—Oh! les misérables dictateurs financiers, ils ne nous ont pas encore assez fait de mal. Ils veulent que notre misère aille toujours croissante. Pour n'avoir pas eu une meilleure compréhension de la Justice, ils seront emportés à leur tour dans la détresse générale.

LA CENTRALISATION DE LA RICHESSE PAR LA BANQUE—Jetons un regard rapide sur le moyen de centralisation de la richesse par le banquier.

La Banque: institution qui reçoit l'épargne des citoyens et dispense du crédit à ceux qui peuvent offrir des garanties suffisantes et facilement liquidables.

"La Banque est aujourd'hui partout, dit GORSE,⁽⁷⁾ et s'attaque à tout ce qui peut donner satisfaction à ses appétits, non de travail utile dont elle ne veut pas, mais d'intérêts sans peine."

Contrairement à l'idée généralement répandue, la Banque ne prête pas seulement l'argent des déposants. Elle peut prêter jusqu'à vingt fois la somme de son encaisse, preuve évidente qu'elle crée l'argent et qu'elle exige un revenu sur une création qui ne lui entraîne aucune dépense.

La raison d'être d'une Banque, a-t-on dit, était de sauvegarder l'argent des déposants.⁽⁸⁾ C'est inexact.

Les Banques existent, en premier lieu, pour enrichir les banquiers. Je fais abstraction de la Banque du Canada. Le rôle social de la monnaie, elles ne le comprennent pas. Au surplus, les banquiers en général ne connaissent guère l'économie et le social. Pas un banquier ne sait en quoi consiste l'usure. Pour s'en rendre compte, il faut lire le rapport sténographié de l'Enquête instituée par le gouvernement fédéral en 1934.

Le Président de l'Association des banquiers, aussi Président de la Banque de Montréal, M. Jackson DODDS, refuse, devant le comité permanent de la Chambre des Communes enquêtant sur la Banque et le Commerce (1934), de définir ce qu'est l'argent (p. 155 du Rapport).

Interrogé sur ce qu'est un dépôt, le même monsieur daigne répondre: "*Un dépôt est un dépôt*". (pp. 157-159.)

Questionné sur la somme d'argent qu'il y avait au Canada, à la connaissance des banques, en 1926, 1929 et 1932, monsieur Dodds se contente d'ajouter: "*Suffisamment d'argent*".

Interpellé sur le volume de numéraire qui devait être disponible en tout temps dans un pays, ce Président de banque se croit habile en donnant cette explication de collégien maussade:

—"*Un volume suffisant pour les besoins du commerce; c'est l'unique réponse que je puis donner maintenant*".

Quand on demande à monsieur Dodds, la définition d'une monnaie saine, il répond: —"*L'étalon-or fonctionnant bien constitue de l'argent sain*". (p. 163).

Q.—Le Canada a-t-il connu, ces deux dernières années, un régime d'argent sain?

R.—Oui.

Q.—Et nous n'avions pas le régime de l'étalon-or, n'est-ce pas?

R.—Non.

—Monsieur Dodds se contredit donc dans ces trois réponses successives et détruit sa

(7) "La Terre et l'Argent qui l'emportera?"—L. Gorse, p. 244.

(8) Délibérations du Comité Permanent de la Chambre des Communes sur la Banque et le Commerce, 6 mars 1934 au 14 juin 1934, p. 156.

propre définition de la monnaie saine. Sont-ce là les attitudes d'un banquier instruit, au courant des questions économiques?

Q.—Pouvez-vous expliquer, monsieur Dodds, comment les banquiers canadiens, tout en adhérant à la théorie de l'étalon-or et en finançant la production seulement, se proposent-ils d'augmenter chez les consommateurs le pouvoir d'achat nécessaire, car ce pouvoir n'existe pas actuellement?

R.—Il balbutie: "*Ma réponse est que je ne puis vous le dire*". (p. 168.)—Un ignare, vous conviendrez, pourrait nous renseigner tout aussi bien.

Q.—Le système actuel peut-il continuer à fonctionner, sans que les individus et les gouvernements s'endettent?

R.—Monsieur Dodds répond: "Si nous voulons faire des affaires, il faut que quelqu'un s'endette. Les gens empruntent de l'argent pour accomplir les choses dont nous parlons. Il faut que les gens contractent des dettes et, d'une manière générale, si les dettes n'existaient pas, les affaires du pays seraient en mauvais état, du moins nos propres affaires, et le reste du pays s'en ressentirait" (p. 168).

L'intérêt des banques est donc de voir les gens s'endetter. Endettement et progrès demeurent des inséparables pour le banquier.

Q.—Avez-vous une idée de la dette privée et publique du Canada, monsieur Dodds?

R.—"Il doit suffire de consulter les statistiques. Je suis sûr que l'on peut facilement trouver cela".—

Les banques vivent des dettes. Le Président de leur Association vient de l'affirmer, mais il ignore même le montant approximatif des dettes publiques et privées au pays.

Des financiers aussi peu renseignés peuvent-ils sortir notre pays du marasme? Ce sont pourtant les vedettes du moment. Vous les entendez prôner leurs théories dans les clubs et les Chambres de Commerce.

Q.—Pourriez-vous, monsieur Dodds, nous donner une idée de l'ampleur de l'inflation qui a eu lieu de 1914 à 1920, par exemple?

R.—"Non, je crains que 'non'. Je n'ai pas ces chiffres".

On se dirait plutôt en présence d'un chauffeur de fournaise qu'en présence du Président de l'Association des banquiers.

L'opinion des banquiers sur le régime d'après-guerre ne devrait influencer en rien les réformateurs. Leurs paroles et leurs oeuvres affichent clairement qu'ils doivent être mis au rancart. Le crédit et la monnaie ne peuvent demeurer sous la direction de personnes aussi peu préparées à assumer une tâche à laquelle est intimement liée la prospérité d'un chacun et partant celle de la collectivité.

LE PRET A INTERET—Voyons comment la Banque s'approprie la bien d'autrui par des moyens légaux.

La monnaie, ne l'a-t-on pas enveloppée d'une sorte de mystère, pour permettre une plus longue durée à l'exploitation du peuple par les banquiers? Voyons, par un simple exemple, ce que peut renfermer d'absurde le prêt à intérêt de cette monnaie.

JEUX DE MARBLES—Vous êtes dix, disposés à jouer une partie de marbles. Les marbles vous manquent. Je vous en prête chacun cent, à condition que vous me remettiez—comme gage—votre montre, et que vous consentiez à me donner chacun, à titre d'intérêt, cinq marbles par semaine. A ces conditions, en vingt semaines, il ne vous restera plus de marbles, n'est-ce pas? Je serai en possession de tous les marbles que je vous aurai prêtés. Vous me les aurez remis graduellement à simple titre d'intérêt, pour vous les avoir prêtés. Cependant, vous me devrez encore, chacun, les cent marbles avancés au début.

Les perdants parmi vous auront, en plus, contracté, je présume, d'autres dettes de marbles envers ceux de qui ils en auront empruntés, dans le cours de vingt semaines, pour ne pas être mis hors jeu. Mais négligeons, pour l'instant, ces complications inévitables et inhérentes aux jeux de hasard.

Que ferez-vous pour acquitter votre dette de marbles envers moi, si je suis, comme le banquier pour les piastres, le seul à distribuer des marbles? Il vous sera impossible de vous en procurer ailleurs, n'est-ce pas? Vous devrez soit en emprunter de nouveaux de moi, aux mêmes conditions ou à des conditions plus onéreuses, pour arriver, après une vingtaine de semaines, à une nouvelle faillite semblable ou pire que la précédente; ou bien vous devrez abandonner la partie et me laisser propriétaire de vos montres. Cette dernière alternative serait évidemment la moins funeste pour vous et, advenant que vous la choisissiez, je resterais alors possesseur de tous les marbles prêtés et je pourrais, en plus, vendre vos dix bonnes montres. J'aurais joué le rôle du banquier. A toutes les vingt semaines, il me serait possible d'arracher ainsi le bien du prochain et de continuer cette extorsion jusqu'à ce que les joueurs de marbles eussent épuisé tout leur crédit ou qu'ils eussent pris conscience de l'exploitation excessive à laquelle je les soumettais. Vous pourriez peut-être m'objecter que celui qui aurait gagné une cinquantaine de marbles aux autres, pourrait facilement, à la fin de chaque semaine, payer au prêteur, ses intérêts en marbles. J'en conviens. Mais n'oubliez pas que plus un ou plusieurs joueurs auront gagné de marbles, pire sera la situation des autres joueurs, à l'échéance. Rien d'impossible que des joueurs, au bout de vingt semaines, fussent endettés non seulement de cent marbles envers le premier prêteur, mais aussi de cent autres obtenus, au cours des vingt semaines, d'un ou de plusieurs des dix joueurs. Plus la situation s'améliorera pour quelques-uns des joueurs, pire elle deviendra pour les autres.

DE LA MONNAIE AU LIEU DE MARBLES—Remplacez maintenant les dix joueurs par autant d'industriels ou de commerçants; les marbles par des mille piastres; les montres par des titres sur des valeurs de plusieurs centaines de mille piastres; les semaines par des ans; et le même problème se pose sur le terrain économique avec un réalisme frappant. L'échéance de ce système est fatalement le dépouillement des propriétaires (9). Leurs valeurs passées en garantie au banquier, tôt ou tard, finissent par leur échapper. L'intérêt composé, en douze ou seize ans, selon qu'il soit de 6% ou de 5%, a tout mangé; il ne reste plus de quoi rembourser le capital emprunté.

Voilà où conduit le prêt à intérêt. Il est stupide, absurde. Nous lui devons ainsi qu'à notre régime bancaire, le déconfiture de 1929 avec ses suites dont la fin s'annonce pleine de perturbations.

Cependant, les banquiers ignorent tellement les méfaits du prêt à intérêt, qu'ils estiment sa limitation comme une injustice faite au banquier. — "Limiter l'intérêt, c'est aujourd'hui une anomalie, nous annonce monsieur Beaudry Leman, Président de la Banque Canadienne Nationale; c'est une intervention indésirable avec la liberté de contrat, et la loi bornant à 7% le taux d'intérêt devrait être abrogée" (10).

Dès 1875, l'Abbé Jules MOREL signalait les causes du socialisme dans l'usure pratiquée sur une haute échelle (11): "Le prêt à intérêt est la cause première du socialisme et, conséquemment, l'un des plus grands fléaux de notre époque".

En 1888, L. GORSE écrivait:

"Ne nous y trompons pas, avec toute sa science, ses inventions et ses découvertes, la civilisation nous mène à la barbarie. Par les désordres, les crimes abominables, le cynisme des infamies, l'audace de toutes les scélératesses qui s'étalent au grand jour, il est manifeste que nous marchons et rapidement à la barbarie, savante si l'on veut, mais par là-même plus barbare.

"N'en doutons pas non plus, la véritable cause de cette décadence est la prédomi-

(9) La ville de Montréal a acheté récemment 9,800 immeubles pour arrérages de taxes dont la majeure partie représente de l'intérêt. Ces achats se font souvent à des prix inférieurs à 2% de l'évaluation municipale. (LE DEVOIR, 20 mai 1942.)

(10) Rapport de la Commission Royale sur la Banque et la Monnaie du Canada, Chapitre 7ème, Art. 253, p. 73.

(11) La question économique du prêt à intérêt, par l'Abbé Jules Morel, p. 431.

nance de l'argent sur la terre; en bouleversant l'ordre naturel de la création; en substituant la fécondité arbitraire de l'argent à la production et à la fertilité naturelle de la terre, on a jeté le trouble et la perturbation dans l'économie sociale voulue de Dieu et établie par Lui.

"On a ainsi fabriqué, organisé cette fausse économie politique qui a pour base la *puissance de l'intérêt de l'argent et non la force productive de la terre*"⁽¹²⁾.

M. GORSE en s'appuyant sur la grande erreur du prêt à intérêt, ne nous a-t-il pas prédit les malheurs présents?

Je désirerais démontrer, en me servant des meilleures autorités, que le prêt à intérêt va à l'encontre de la loi divine et naturelle. Le banquier, lui, déclare que le taux d'intérêt devrait être soumis aux lois de l'offre et de la demande. Il veut pour lui, liberté complète pour la fixation du loyer de l'argent. Jugez ce que deviendrait la société, si nous l'abandonnions à un tel régime. Elle ploie déjà misérablement sous le fardeau des dettes accumulées par un taux d'intérêt limité. Quel serait son malheur si la loi n'avait mis aucun frein à la cupidité des prêteurs?

Nul ordre nouveau possible avec l'usure. Elle ronge l'économie contemporaine. Dès l'antiquité le prêt à intérêt a été considéré comme contre nature. SENEQUE et ARISTOTE l'ont condamné. Saint-Ambroise, Saint-Jérôme, Saint-Basile, Saint-Jean-Chrysostome, Saint-Augustin et Saint-Thomas en ont fait autant.

Des conciles,⁽¹³⁾ à toutes les époques, ont aussi condamné le prêt à intérêt:

Le Premier Concile Général de Nicée en l'an 325, interdisait le prêt à intérêt aux ecclésiastiques;

Le Concile de Carthage en 348 défend l'usure aussi bien aux laïques qu'aux ecclésiastiques;

Le Concile d'Aix-LaChapelle, en 816;

Le Deuxième et le Troisième Conciles oécuméniques de Latran, (celui de 1215 alla jusqu'à interdire la communion et la sépulture ecclésiastique aux prêteurs à intérêt);

Le Concile d'Avignon en 1209;

Le Concile d'Albi, 1254;

Le Concile de Sens, 1269;

Le Concile de Poitiers, 1261;

Le Concile de Trèves, 1210; (celui-ci ordonne la restitution de tout ce qui dépasse le capital avec ces mots): "Quidquid sorti accidit usura est".

Le Concile oécuménique de Vienne, 1311, condamne l'usure comme contraire aux lois divines et humaines; menace d'excommunication ceux qui s'opposent à la restitution des intérêts usuraires et déclare hérétique celui qui soutient qu'on peut pêter à usure sans péché.

Le Concile de Ravenne, 1317;

Le Concile de Reims, 1583, qui ordonne, lui aussi, la restitution des intérêts et s'appuie sur le passage de Saint-Luc.

Le Concile de Toulouse, 1590.

(12) La terre ou l'argent . . . qui l'emportera? p. 204.

(13) Manuel de Sociologie catholique—Belliot O.F.M., page 161.

BUREAU DE DENTISTE A LOUER. Endroit idéal, clientèle de campagne. Etabli depuis huit ans. Cause départ pour service militaire. Visible en Aout temps, jour ou soir. Plus amples renseignements sur place. S'adresser Mde. Vanasse, Saint-Rémi, Co. Napierville, P.Q.



Courtesy of Saturday Night.

Selected by public vote as the best picture of the year by members of the "Pictographers Society". The camera composition above has been awarded the SATURDAY NIGHT trophy which is given in annual competition. Author of the prize-winner, "Misty Morn," is K. C. McClelland.

As civilization advanced people began to discover that more was to be gained by flattery than by force—and that flattery had a larger purchasing power than coin of the realm. It has been used to sway individuals and to influence crowds, it has generally been the keenest weapon in the armoury of the rogue and adventurer, and great men and saints have often not been able to dispense with it.

Flattery has now vanished in most of the cruder forms, but is still just as powerful in more subtle ways. Our manners are founded on flattery and it is still one of the most powerful aids to worldly success.—Marjorie Bowen in "World's Wonder and Other Essays."



S. L. HONEY, D.D.S.

Timmins, Ontario

President of the Ontario Dental Association



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PRESIDENT'S ADDRESS

by WM. W. WOODBURY, B.Sc., D.D.S., Halifax, Nova Scotia
Dean of the Faculty of Dentistry, Dalhousie University

TO ATTEMPT a detailed survey of the activities of the Canadian Dental Association during the past two years would be to repeat in large measure the reports of the Chairman of the Board of Delegates and of the Secretary. These, together with the reports of the Committees that have furthered the business of our Association, will appear in the pages of the Journal. I commend them to your close attention. Our Association will be effective in large measure as its officers enjoy the encouragement and constructive criticism of an informed membership. The reports reveal the extent of the interests of the Association and I trust that they may be the means of releasing in some of your minds new ideas and new approaches that you will develop and hand on for the common good.

Under the circumstances the field reserved for your President appears to be those matters with which he has been most intimately concerned together with such general observations as may be useful to his successor and to the Association in formulating policies and visualizing responsibilities for the future.

During the past two years the great pervasive over-shadowing reality has been the war. It has coloured our thinking and conditioned our action. We have had to face old questions in its light and it has thrust new problems upon us. It has materially altered the dental map of Canada as the professional needs of the fighting services have had to be met. It has accelerated an already growing interest in public health and its dental implications. It has brought home to dentistry the need for a strong central organization competent to handle professional affairs of national scope. It has heightened our sense of fellowship with those of our calling in the old land and hastened the forging of closer ties between the Americas, North and South. It is altering the pace of dental education, and at this stage no one can foresee to what extent the forces it is releasing may also alter the content and objectives and direction of dental education.

Such a time is bound to be one of testing and sifting; of reconsideration and reassessment; of proving all things and, under the increasing pressure of war,

* Presented before the Canadian Dental Association, Toronto, Ontario, May 18, 1942.

holding fast only that which is good.

As a contribution to the war effort dentistry has expressed itself most directly through the Canadian Dental Corps. You are familiar with the circumstances reported by my predecessor two years ago. At the call of the Government on the eve of war he was able to lay before them a carefully prepared scheme that had been worked out by a committee of this Association. The acceptance of this plan was the foundation of the Corps and we have seen it grow as it has brought the ministrations of our profession to the fighting services at home and abroad. We are proud of its record and shall continue to be actively concerned in its development and support. The creation and growth of the Dental Corps has left many communities across Canada with inadequate dental services. This condition has become critical in parts of some of our provinces. It is realized more and more that in so far as these problems can be met by organized dentistry the responsibility is both national and provincial. This is increasingly the trend in matters of public health.

Two years ago we were much concerned about the reception of British Guest Children and the children of British dentists. The matter was carefully canvassed at that time but as the procedure to be followed was being worked out the Battle of the Atlantic interposed factors that necessitated a change of policy on the part of the Governments concerned. Should this scheme again be undertaken the information already gathered will enable your Association, once more in co-operation with provincial bodies, to step more effectively and more promptly into the picture than we were able to do at that time.

There has been evident in many parts of the country a strong desire to show in some tangible way our regard for our professional brethren who have been bombed out in Britain. After some cor-

respondence with the British Dental Association and consultations with a representative British visitor recently amongst us no practical scheme for implementing this desire has to date been found. But the very fact of these interchanges and of the sentiments expressed has strengthened inter-commonwealth professional understanding. In this connection we wish to record the very welcome visit of our distinguished British colleague, Mr. A. E. Rowlett. The officers of your Association were deeply grateful to the various dental bodies across Canada who underwrote and arranged the details of Mr. Rowlett's visit; and we were especially grateful to him for the way in which he made Canadian dental problems his own as he travelled across Canada.

We have been in correspondence through the Chairman of the Pan American Committee of the American Dental Association and later directly, with a group of South American dentists who look forward to holding a Pan American Dental Congress in Buenos Aires in 1944. We have signified on your behalf the willingness of the Canadian Dental Association to participate in preliminary conversations looking to that end.

A similar and related movement grew out of the meetings of the Pan American Orthodontic Congress held in New Orleans in March. Those attending that meeting took steps towards the establishment of a Pan American Dental Federation. Canada was represented and it is to be hoped that at some future time it may be possible to hold a full dress meeting of the Canadian Dental Association participated in by visitors from all the Americas.

Thanks to a hard working, persistent, clear headed committee and to the friendly co-operation of the various provincial bodies across the country we are able to report that arrangements for the setting up of a central office for the Canadian Dental Association in charge of a full

time executive officer have reached a stage that the most optimistic of us would scarcely have dared to look forward to with any degree of confidence two years ago. While there are still details to be considered and disposed of the unanimous support of the provinces assures the establishment of the undertaking in the reasonably near future.

A central committee of this Association is studying in co-operation with provincial committees the matter of dental participation in Health Insurance in the event of such legislation being placed on the statute books. Information gathered by a committee of the Royal College of Dental Surgeons of Ontario has been cheerfully placed at our disposal. It is perhaps not surprising that opinions and data bearing on the relation of the dentist to the various Health Insurance schemes are easier to come by than information that would help one to decide just what type of dental service and organization are most in the public interest. This exceedingly complex problem is of vital concern to the profession and to the public. The Government will naturally look to us for constructive leadership if it decides to enter this field. With the record of the establishment of the Canadian Dental Corps before us as a precedent we must make every effort to arrive at a solution that will reflect the best thought of the profession.

Dental Education has felt the impact of the war as the Department of National Defence has requested acceleration of the medical and dental courses. Fortunately there is no suggestion that teaching should be curtailed. The result is to be accomplished by utilizing the holidays. Realizing that the student is thus deprived of an opportunity to earn money the Government is aiding those of the two final years who look forward to the Dental Corps and is developing other plans to meet certain needy cases. In this connection I would like to publicly acknowl-

edge on behalf of Canadian dentistry the friendly inclusion by the W. K. Kellogg Foundation of Battle Creek, Michigan, of Canadian dental schools in their very generous grants for student loan and scholarship funds designed to meet the present emergency and to encourage exceptional students otherwise unable to enter the field of dentistry. Approximately all the dental schools in the United States and Canada have been offered grants to the amount of \$10,000. One hundred and fourteen accredited medical and dental schools are receiving aid from the Foundation, the total expenditure for the program being approximately \$1,250,000.

Your President has an unusual opportunity to observe trends within the profession during his term of office. A large and varied correspondence passes before him. Matters are brought to his attention for information if not always for action. In return for the privilege of occupying such a vantage point surely the obligation rests upon him to attempt an evaluation of at least some portion of the ever changing dental field. I propose to devote my concluding remarks to Dental Education and the Public Health.

We have noted the impact of the war on the fabric of dental education. We have also noted the increasing tendency of Government to realize its responsibility for the public health. I think that it can be shown that there are tendencies inherent in these apparently separate movements that will eventually demonstrate their essential dependence upon one another. I make no apology for discussing this subject before the membership of the Canadian Dental Association. It is not the exclusive concern of educators and public health officials. Every intelligent dentist should develop an informed opinion regarding the philosophy underlying dental education so that when changes are in the air his conclusions may be based on informed judgment rather

than prejudice. For those who pride themselves on being practical men I submit that an informed thought-out opinion is the only practical one.

The objectives of Dental Education should be in the main two-fold. The first concern of any dental school is to turn out practitioners furnished with such knowledge and skill as we now possess to meet the dental needs of the community. This might be termed our short term objective. A dental school that fails in this regard is not fulfilling its function.

But there is another long-term objective that is more difficult to attain perhaps because it is less clearly discerned. And in part at least it is less clearly discerned because we are conditioned by a century old educational tradition that has concentrated on the technical skills designed to meet the short term objective which occupies most of our thought. This second objective of the dental school should be the investigation of the conditions that make technical dental procedures necessary.

Public Health Dentistry is very likely to enter the picture at this point by supplying a yardstick to measure the effectiveness of the dentistry that is the product of the short term objective of our schools. To put it more simply, when the public comes to foot the bills it is going to ask if it is getting its money's worth. It has been said recently that "one of the major obstacles in all studies of disease is the difficulty of measuring quantitatively the severity of a disease or its symptoms. We do not know definitely whether dental caries is a disease or a symptom, but we do know that it is to some degree measurable." So the statisticians and the clinicians will join hands as they are already doing in other public health fields to see how effective the dentistry supplied the public really is. I suspect the answer to their inquiry will tend to sharpen general interest in

the possibility of finding some means of preventing the conditions that make necessary such an outlay for reparative dentistry. It would be natural for Government to turn to the dental profession for the scholarship necessary to undertake such investigation but it is by no means a foregone conclusion that dentistry will be in a position to supply such scholarship in any adequate amount.

Dentistry has loudly lamented the fact that sufficient resources have not been forthcoming to undertake dental research. Four years ago a statement was made by the President of the Rockefeller Foundation to the general effect that "almost no dentists are trained in such a way that they can do research" of acceptable quality. This would indicate that financial resources are available in a way that dentistry has been slow to realize.

In attempting to set its educational house in order dentistry has from time to time lengthened its course but it is doubtful if it has fundamentally changed its educational philosophy. We have gradually taken on more of the pre-clinical sciences but have neglected the responsibility which is ours of really integrating them with our clinical teaching. We have appealed to the medical science teachers and they have responded but as clinical teachers we have failed to take our end of the load. As the Dean of the Dental School of the University of Illinois recently said we thought "that we could upset the curriculum at one end without affecting the other." And he further suggested that this comes of confusing medicine with therapeutics.

What is medicine—really?—not the skills of the practitioners of the various arts of healing; not the ability to use the scalpel that distinguishes the general surgeon nor the multiplying laboratory procedures of the internist; not the calculations in refraction of the ophthalmologist nor the manual manipulations of the obstetrician; not the prostheses of

the orthopaedist nor the tests and calculated suggestions of the psychiatrist; and by the same token, not the placing of fillings and the fabrication of dentures and the manipulation of orthodontic appliances and the periodontal medications of the dentist. These are all therapeutics. They are not medicine in the sense here suggested.

What then is medicine? It has been recently defined as "the broad field of medical science, from which all the various specialized practices of medicine derive their knowledge." It is the great reservoir of biological knowledge that we sometimes refer to as the pre-clinical sciences; that great reservoir that is constantly being filled by the research worker and sometimes by the clinician and never depleted by withdrawals.

What then is the difference between the doctor and the dentist? From an educational standpoint the chief difference to date seems to be that the budding doctor spends at least two years dipping deeply into this general reservoir of the medical sciences without being distracted by the procedures of therapeutics, while the budding dentist dips as deeply as he is able considering the fact that while he is doing so he must carry an initial load of therapeutics in the form of dental techniques that may total as much as one thousand hours.

Now perhaps this is necessary. Perhaps dental skills are the most difficult to acquire in the whole field of medicine. Some dental teachers think they are. Perhaps it is well to teach students to treat conditions before they understand them. I am not attempting to answer these questions, but they are being asked not only by individual teachers but by at least one great university in the form of fundamental curricular experimentation. You all know that I am referring to the so-called Harvard plan. It is notable that the venerable institution that first welcomed the lusty infant dental education,

then some twenty-five years old, into the university family is, after the passage of another seventy-five years, still interested in the child. The significant thing about the Harvard plan is not the plan itself. Doubtless it will be subject to modification from time to time. The important thing is that a great university that has always displayed the pioneering spirit is willing to experiment in dental education.

Before you condemn that experiment ask yourself how long dentistry will be able to play around in the university atmosphere if it persists in following the methods of the narrower technical school; how long it can pose as a learned profession if its members are trained mainly to practise a craft. As the Secretary of the Council on Dental Education of the American Dental Association said a year or so ago "To command the university support now accorded to medicine, for instance, and to meet the tests of university discipline applied to all other professional schools, dental education must undergo a transformation from within and must consciously put on all university habiliments."

Perhaps our education explains why, until recently at least, a large part of dental investigation has been concerned with materials rather than biological and disease processes; in other words with invention rather than research. And it may explain why financial resources are still looking for competent dental research workers.

I have dealt frankly with a very controversial subject. May I suggest that even now in the stress of war these matters should be weighed most carefully by all of us. We have already learned that a period of demobilization and rehabilitation does not create the atmosphere for a calm consideration of educational policy. Forces will be at work that will demand quick results, so we must fortify our judgment while we have the opportunity.

There is no occasion for discouragement. There is every reason for confidence and hope. We are a young profession. We have recently celebrated the completion of the first century of organized dentistry and formal dental education. As already noted it has been in the main a century of technical accomplishment. We are now coming to realize

that this alone will not solve our problems. We must face up squarely to the question of the cause of the ills we are treating. Let us determine to do so in an objective scientific spirit, remembering the words of Plato who over two thousand years ago maintained that the essence of science is "the discovery of things as they really are."

A New Method of Treating Unerrupted Teeth by Means of Surgery and Orthodontia

by SAMUEL W. LESLIE, M.D., D.D.S., Toronto, Ontario

HISTORICAL

THE feasibility of altering the position of a tooth was well known to many of the early practitioners of dentistry. But since in the early days of dentistry the primary interest of the dentist was the replacement of lost teeth with artificial appliances, the art of orthodontia was sadly neglected.

When at last the science of orthodontics did begin to develop, because of the interest stimulated by Fauchard, the aesthetic angle was considered of primary importance. Since most irregularities were due to a crowding of the upper arch with the resultant prominence of the upper cuspids, the method of treatment advised by him, varied only slightly. Either the cuspids were removed, or if the efficiency of the first or second bicuspid was impaired, either through caries or because of irregularity in position, they were extracted, and the cuspid allowed to take their position. It is of interest to note that many general practitioners of dentistry today, as well as some orthodontists, still adhere to this method of treatment.

DISADVANTAGES OF METHODS IN VOGUE AT PRESENT

With the advent of the various ingeniously devised orthodontia appliances and their constant improvement a change has come about in the treatment of these malposed cuspids. The application of the various principles of treatment must perforce differ with the variety of the irregularity, and appliances were constructed to apply to each case. It is not the purpose of this paper to enter into a discussion of various orthodontic appliances, but the main principle of treatment on which their use is based, is watchful waiting and guiding natural development. It was soon realized by the orthodontist, however, that the sooner malposed teeth were treated, the better is the outlook for success, because the longer a tooth is allowed to occupy a wrong position the more difficult is the treatment, and the poorer the prospect of ultimate correction.

The correctness of this principle became more apparent when the x-ray began to be more extensively used in the practice of orthodontia and many unerupted

upper lateral incisors as well as cuspids and other teeth were discovered. Thus some method was sought which would permit the orthodontist to use an artificial appliance on these partially erupted, unerupted and suppressed teeth. The oral surgeon was then asked for assistance.

Where the cuspid or lateral incisor had not erupted far enough for bands to be applied the method devised by Dr. Angle many years ago was in common use by many orthodontists. This method consisted essentially in drilling a small hole in the visible portion of the tooth, a small screw with a loop or knob was then inserted into the cavity. By an arrangement of wires, as shown in Fig. 1, the

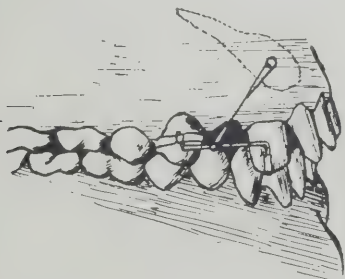


Fig. 1.

This Diagram (After Angle) depicts one of the Older Methods of Dealing with Buccally Unerrupted Cuspids Close to the Surface.

tooth is then brought into position and later the small cavity is filled with gold or artificial porcelain.

Where the tooth was covered by a small amount of alveolar bone and mucous membrane the co-operation of the oral surgeon was sought. He made a small flap removing some of the mucous membrane and bone thus converted the unerupted case into a partially erupted one. The tip of the crown now being visualized, the technique of Dr. Angle was then usually followed. This method ideally outlined for unerupted teeth, while still useful for buccally placed teeth, at times presents a number of drawbacks.

It is difficult to avoid contaminating the drill-hole with extravasated blood.

And even though the technique is very carefully carried out, a small amount of blood usually enters this cavity, and because the dentinal tubules seem to absorb some of the iron from the hemoglobin in the blood, the tooth may eventually become discoloured. A second objection is raised to artificial production of a cavity in the tooth itself. Since this cavity is usually later filled with some sort of a silicate filling, the primary objection may not appear to be so important, except that we know that some years later many of the pulps degenerate under silicate fillings and lead to abscess formation. Finally objection is raised to the constant packings with gauze necessary to keep the wound open for some time which leads to much soreness, pain and aggravation to the patient. The occurrence of secondary infection because of these re-packings is also an important drawback.

As the operative procedures improved the objection to the insertion of a pin was eliminated by a more thorough uncovering of the unerupted tooth. The orthodontist was thus able to make an appliance with a spring which aided in moving the tooth into the required position. However, we still had to deal with keeping the wound open with constant packings, and therefore we were still confronted with the usual objections noted above.

The seriousness of these constant re-packings particularly because of secondary infection came to be quite a problem. In fact, many devices to do away with this packing were developed by the orthodontist, among them being a spring to retain the gutta-percha or modeling compound used by some as a packing, in the cavity. Even special appliances to keep the flap open were devised, and later on, lubricated and medicated gauze packings seemed to improve the technique and aided in healing of the wound, as well as being a source of more comfort to the patient.

However, as the oral surgeon's skill and technique for uncovering teeth improved, the orthodontist began to require of him that he uncover teeth which were malposed buccally such as crowded lateral incisors; and cuspids were treated, which when inguo-verted were required to be brought into alignment. Thus, the maintenance of a clean, healthy and open wound became a more complicated problem because of its prime importance.

Various oral surgeons then began to use anodyne ointments in the wounds and some difficulty was encountered with the retention of these ointments. It was then suggested by Strock¹ that celluloid crown forms, filled with this obtundent dressing could be placed over the wounds or even over the tooth crown itself. This improvement in technique seemed to serve a number of useful purposes. The danger from secondary infection was reduced, and the pain and discomfort to the patient from repeated packings seemed to be removed. It was further noted that the unerupted tooth seemed to be stimulated to more rapid growth, or perhaps extrusion because of this celluloid crown form causing a certain amount of pressure.

The dental literature and text-books on orthodontics are singularly devoid of much discussion on surgical operative procedures as related to malposed and unerupted teeth. A few authors, notably Strock¹ and Mershon², have outlined procedures which are essentially a combination of the various techniques noted in the preceding paragraphs and which have been found useful and satisfactory although on occasion leading to numerous complications. Can celluloid crowns be effectively sterilized?

ADVANTAGES OF NEW METHOD

About six years ago we devised a method for uncovering malposed and unerupted teeth which has been found unusually satisfactory to all concerned. The technique is easy to master on the part of

the oral surgeon and requires only repetition to improve his skill. For the orthodontist it has simplified the construction of his appliance and has improved the chance of a more successful end result without too much manipulation. For the patient the gravity and seeming risks of complications of the so-called uncovering operation, which has heretofore prevented many parents from agreeing to having it done on their children, has been done away with. Since all these operations can be accomplished under local anaesthesia and in the office, there is no need for hospitalization. The post-operative pain and discomfort has also been done away with, or almost so. This procedure can also be utilized where the orthodontist has decided that it would be advantageous to speed up the eruption of some teeth in the case of retarded patients.

DIAGNOSIS AND APPLIED PSYCHOLOGY

The preliminary diagnosis having been made by the orthodontist and carefully taken x-rays being available (occasionally stereoscopic films are an added help) the oral surgeon can proceed with his operation.

Since most of the children requiring this type of service are over the age of 10-12 a reasonable explanation is given them about the procedure to be followed. They are reassured regarding the pain factor and their co-operation is asked for. By transmitting the operator's confidence to the patient, a co-operative attitude is obtained easily. No undue or unnecessary fuss should be made with drapes or coverings and the child should not be blind-folded as this tends to develop a fear of the unknown. The operator should have all the instruments to be used in the operation available and near at hand, but not in sight of the patient, and no time should be lost in following through the carefully planned steps of the operation.

TECHNIQUE OF OPERATION

The field is now prepared in the usual manner. The choice of anaesthetic solution should be 2% novocaine with epinephrine and, although infiltration can be used, the block method is preferable.

Using a sharp scalpel the incision is made, and a flap laid back along with the mucoperiosteum by means of a periosteal elevator. In many cases the overlying bone can be removed with a sharp chisel or small rongeurs.

To uncover upper cuspids which are buried high up in the palate or buccally in the canine fossae, burs and small curettes should be used. As the operation proceeds, the bone débris and crypt tissue should be washed out with warm normal saline solution which is removed by suction. Exposure of the unerupted crown should be as complete as possible on all sides and should extend upwards until the neck of the crown is completely exposed. A piece of ligature wire previously sterilized is now made into a loop and this is placed over the neck of the tooth. To prevent this wire from slipping, an instrument shaped like a reversed scaler is used to tuck the wire well over the cingulum lingually and the dento-enamel junction buccally. The loop is then tightened by twisting.

Occasionally an unerupted crown may be found to be firmly wedged against the adjoining tooth and it would be impossible to make a space for the placing of this wire without injuring or denuding the adjoining tooth. In these cases the wire can be forced over the obstruction after using a very thin bladed elevator with a little wedging pressure. The wire ends projecting from the wound cavity should be left quite long and can be wound around the crowns of neighbouring teeth until the orthodontist is ready to use them, when he will cut them to their required length and attach them to his appliance.

After excising a generous piece of

mucoperiosteum, the wound is closed with interrupted catgut or horse hair sutures. The cavity thus formed is packed lightly with some medicated-gauze and this is removed on the third day.

POST-OPERATIVE TREATMENT

In twelve cases there has never been any complaint of after pain and we have had no trouble with secondary infection. In some cases where the operation was performed buccally there has been some post-operative swelling for 48 hours and this was easily controlled by means of ice packs. We have found no need for prescribing sedatives other than the administration of an occasional aspirin tablet.

POSSIBLE COMPLICATIONS

The only complication worth considering is the question of denuding the roots of adjoining teeth during the uncovering. We feel that occasionally this is beyond the control of the surgeon, in as much as this even occurs when an impacted tooth is removed, if the crown has been impacted upon the adjoining tooth.

A careful x-ray examination prior to the operation will usually give us sufficient information to warn us of this possible complication.

We will also become aware of other pathological conditions which may be present around the unerupted tooth. The possibility of cystic formation, hypercementomas, rarefying osteitis and a cleft of the bony palate should always be kept in mind. Supernumerary teeth may also be present, as well as definite focal infection from surrounding teeth. These conditions, if present, can be dealt with at the time of operation.

Besides the need for a careful diagnosis before deciding on the advisability of saving or extracting the unerupted tooth, a number of other factors should be taken into consideration. The state of health of the patient is of prime importance. The anatomical relationship of the impacted or unerupted tooth to the maxillary sinus

and to other surrounding tissues, as well as the floor of the nose should be considered. The degree of calcification of the crown and root of the unerupted tooth, and whether caries or root absorption exist will be also apparent from the x-rays, (See Fig. 2) and form important

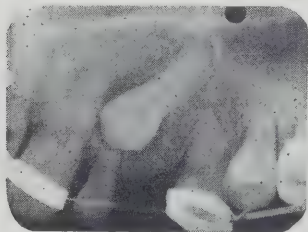


Fig. 2.
Showing Root Absorption.

elements upon which a decision should rest.

In order to conserve space only two, more difficult, cases are reported herewith. Besides serving to illustrate all the details as previously noted, a number of other interesting operative factors will be shown since these are more complicated types of cases. The vast majority of cases are much simpler to handle.



Fig. 3.

Case I. The patient, Miss I.S., was treated in co-operation with her orthodontist Dr. M. L. Simon, who wished to bring down a completely unerupted cuspid.

As shown in the x-ray in Fig. 3, the cuspid is located high up in the maxilla and its root is directly related to both the floor of the nose and the maxillary sinus.

Applying the technique previously outlined, the operation was performed. The wire was placed around the crown of the tooth, and then a trough was chiseled out in the bone of the alveolar process between the lateral and bicuspid. It was hoped that this trough would eventually serve as the socket for the tooth, as well as aiding in directing and causing more rapidly its movement downwards. The ends of the long wire were then wound around the bicuspid, and the entire flap was completely sutured over the wound. No mucoperiosteum was exercised in this case. Thus the wire remains buried in the trough. Three or four days later the patient had her orthodontic appliance put on by her orthodontist, and the wires were then attached to a spring on this appliance. (Fig. 3A).

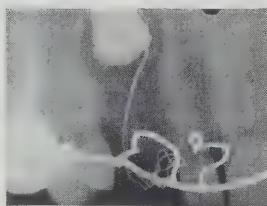


Fig. 3A.

This wire has now remained in place about eight months and the orthodontist has used it to exert various types of forces which he deemed to be necessary. Figure 3B depicts some changes in the ortho-

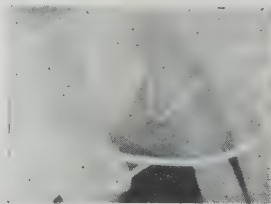


Fig. 3B.

dontic appliance, and the wire is still in use. The x-ray shows also that the cuspid has made considerable progress in eruption, and it appears to be following the course of the trough.

It is to be noted that no infection has ever occurred from this indwelling wire. A further point to be stressed here is that the wire ends, when first placed, should be of a considerable length so that the orthodontist can manipulate and cut the wire strands to his own satisfaction.

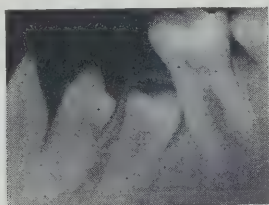


Fig. 4A.

Case II. Figure 4A serves to illustrate how this type of operation can be used not only as an aid to the orthodontist in bringing into line an unerupted tooth, but if a careful diagnosis is made and treatment planned accordingly, this operation is also useful in aiding retarded cases. This case, Miss E. R., was treated in co-operation with her orthodontist Dr. H. E. Leslie, who wished to bring the

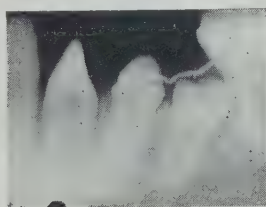


Fig. 4B.

cuspid and two bicuspid on the lower right side into alignment and occlusion. The operation was performed as previously outlined, but in addition the operative procedure included the removal

of the alveolar bone obstructing both bicuspid, Fig. 4B. Since the root of the second bicuspid was still in the process of formation, it was deemed advisable to place the wire around the crown of the first bicuspid only. X-ray Fig. 4C depicts

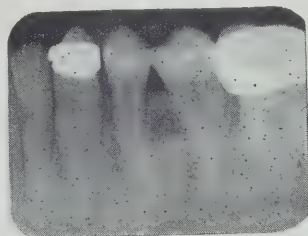


Fig. 4C.

the condition of the teeth in this case nine months later. It is possible that in this case, growth of all teeth was stimulated by the increased movement of the wired tooth.

CONCLUSION

The object of this essay has been to present to the dental profession in general and to the orthodontists and oral surgeons in particular, a review of the various older techniques, and adding a new method of dealing with unerupted teeth where orthodontics is indicated. The more general use of this method will in many cases eliminate the loss, by extraction, of many teeth which can be brought into position in the dental arch, and thus they can be made to serve the purpose for which they were intended. We believe that an important adjunct to the treatment of orthodontia patients has been made with this operation.

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398 Bloor St. W., Toronto, Ontario.

The Use of Acrylic in Removable Partial Dentures

by IRVIN H. ANTE, D.D.S., Toronto, Ontario

THERE is no procedure in dentistry that gives more satisfaction both to the operator and the patient, than the restoration to health and beauty of a natural denture by a properly designed, constructed, and accurately placed partial denture, be it fixed or removable.

As a means of combining the replacement of missing teeth with the restoration of lost tissue, and with an observation of the highest physiologic and sanitary requirements, the removable partial denture has a field of usefulness.

Removable partial dentures are a useful method of procedure in proportion as the indications for its use are favourable and as the application may be made skilfully. Unless all of the details of construction are observed and executed skilfully, this type of restoration will do much injury to the supporting teeth and their investing tissues; the removable denture should not be regarded as a universal restoration.

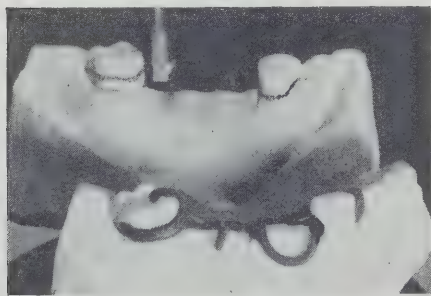


Figure 1

Figure 1.

Pour the master cast in stone and make a duplicate in hard investment material. Tilt the stone cast to the most favourable

angle for the establishment of the guide line in order to determine where the abutment teeth should be engaged for retention. The occlusal rest and body of the clasp should not extend over the guide line. The free ends of the clasp are extended upon or below the guide line. The cuspid clasp is designed to take advantage of the opposing convexed surfaces mesio distally, and to eliminate display of gold on the labial surface. The clasps and the framework are carefully waxed up and polished, then multi-sprued, invested, heated and cast in metal.



Figure 2

Figure 2.

Try the framework to the abutment teeth in the mouth and make the necessary adjustments before completing the restoration. Make sure the framework is adequately provided with loops and studs for the retention of the acrylic, and is strong enough to withstand the stresses and strains to which it will be subjected.

Figure 3.

Select three Justi Denta Pearl Plastic teeth of proper shade and size. Grind the teeth to fit the ridge and in functional occlusion with the opposing teeth.



Figure 3

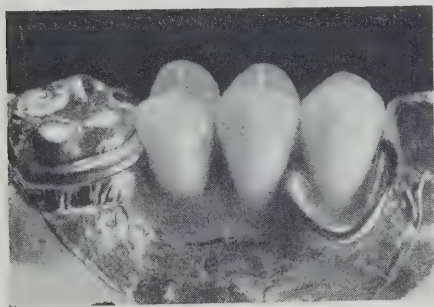


Figure 4

Figure 4.

Tin-foil the model, then place the framework and teeth upon the model and wax up to proper form and contour. Do not display more gum on the buccal surface than is necessary to offer resistance against horizontal pressure.

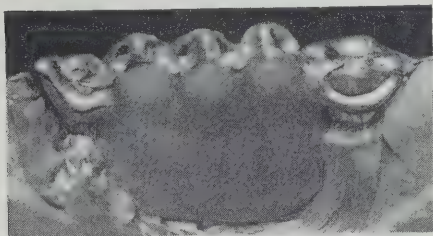


Figure 5

Figure 5.

Tin-foil the buccal and the occlusal surfaces of the teeth. Burnish the tin-foil closely to the acrylic teeth with a metal burnisher.

Figure 6.

Embed the model in the lower half of the flask exposing the lingual surface. Tin-foil the surface and pour the upper half of the flask. Separate the two halves of the flask, and boil out the wax. Pack with pink acrylic, trial pack two or three times, process and finish.

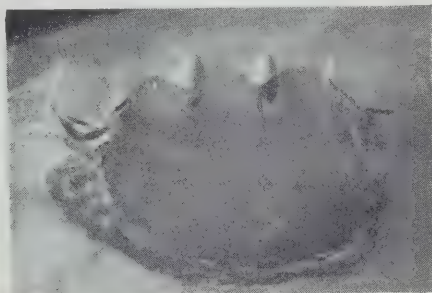


Figure 6

Figure 7.

Shows the finished removable partial dentures with cast clasps and framework, acrylic teeth and acrylic attachment. This restoration is practically indestructible, sanitary, easily altered or added to, and

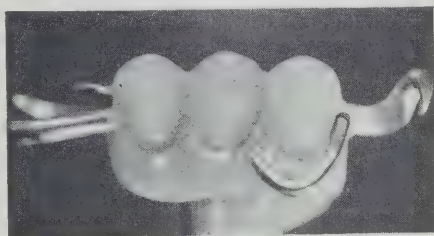


Figure 7



Figure 8

meets the requirements of the general practitioner.

Figure 8.

Removable partial denture with wire framework. The bicuspid is 15 gauge,

half round high tensile wire. The molar is a wire clasp lined with pure gold and soldered together (Matrix Clasp). The teeth are acrylic with the attachment made of the same material.

The Role of The Dental Assistant*

by MAXWELL H. TOKER, D.D.S., Montreal, P.Q.

IT IS self-evident that success in dentistry is largely dependent upon the full use of available office time. It follows, naturally, that efficiency of operation and in the conduct of the office will result in the conservation of time and energy and enable the dentist to render better service to more patients and with more adequate compensation. This, indeed, is what dental economics or office management aims to teach us. And this, briefly, is what our recent course of "Progressive Studies in The Conduct of Dental Practice" has sought to do.

The well trained and efficient dental assistant should be able to assume nearly all duties in the office with the exception of the actual practice of dentistry. The dentist who is the fortunate employer of this type of assistant is thus able to take full advantage of his time at the chair, or in study, or for needed recreation. Such a girl is perhaps rare, for considering the diversified qualifications required and the comparatively modest salary she is usually offered, is it any wonder that the dental office holds little attraction for her?

Yet it is quite possible for the average dentist to have the type of dental nurse who will be an asset to his office as many men here have proved to their satisfaction. Even in these disturbed and changing days, with plentiful employment about,

there are many girls willing and capable of making good dental assistants. It is largely a problem of careful selection and proper training. Given a girl possessing intelligence, cleanliness and other desirable attributes you can make of her the dental assistant you want her to be. In the final analysis, the orderliness of the dentist, his office system and method of training the assistant will determine the outcome.

CHOOSING AN ASSISTANT

How then should one proceed to choose a desirable dental assistant? We are all confronted with this problem from time to time and should have a definite formula for guidance. Too often we are inclined to depend on the dental supply salesman to help fill our office vacancy; and all too often with indifferent results. Or else we accept some relative or friend's recommendation and try to fit the proverbial square peg into a round hole. Since very few experienced and capable dental assistants are available in normal times, still less nowadays, the need for training our own office aides becomes an urgent necessity.

It takes time, energy, patience—and more patience to turn the average girl into an efficient and pleasant dental assistant, so you might as well devote a little time and thought to her selection at

* Presented before the Mount Royal Dental Society, February 24, 1942.

the outset. My personal experience since I employed my first assistant fourteen years ago has been varied. In all I have had seven girls who have worked in my office for periods ranging from a few days up to ten years. In the case of the young lady who worked for me ten years, she began when only seventeen years old and developed into the best assistant I've had. Naturally, she had some minor shortcomings but she had intelligence, loyalty and a sense of judgment which were her predominant qualities, and gained her the respect of my patients and of her associates. In other cases I've been less fortunate in my choice. One girl came to me with the most glowing past history of accomplishments and recommendations and proved a complete flop in less than a week. Her conception of her duties was apparently that of social secretary and her main thought to entertain my patients. And still another, who claimed two years experience in a hospital, amazed me one day by breathing on a mouth mirror to give it an extra polish after sterilizing.

Based on my own experience, as well as that of others, I have come to the conclusion that your best dental assistant—and one likely to stay with you longest—is the one that you have trained yourself. Personally, I would rather take an intelligent girl of about 18 to 25 years, providing she is really interested in dentistry and possesses other desirable qualifications, than to attempt to convert some misfit, over age stenographer. Placing a properly worded want "adv." in the evening newspaper, giving a box number, is the simplest means of getting a ready response. The last time I had occasion to do so I found over fifty replies in the mail. Judged by standards of composition, neatness, expression and general qualifications it becomes an easy matter to eliminate immediately most of the applicants. I find it helpful to grade the likely ones into A, B, C and D categories

and proceed to reread the best of them making my comments on the reverse side. I usually show these selections to my wife just to get her reaction. It's surprising how helpful a woman's intuition can be. Finally, I call the most favourable of these applicants by telephone and arrange for a personal interview. This first telephone contact is most important for it discloses the applicant's clarity of voice and manner of speech. When the applicant arrives at the office the fine points of selection really begin. I usually start with the routine questions, meantime making notes on reverse of the application letter regarding the prospect's general appearance, health, personality, capabilities and apparent fitness for the position. All things being equal, I prefer the girl who lives at home with her parents. The question of remuneration and hours of service are discussed and character references noted. If favourable, I tell the applicant to expect a call in a day or two and in fairness to these girls I have made it a rule to make this call even if I could not engage them. When your choice is narrowed down to two or three you can't always be certain of having made the best available selection and it sometimes becomes necessary to call one of the other prospects that you may have on file.

TRAINING AN ASSISTANT

Having selected your assistant, it is up to you to give her every opportunity of making good. In training a new assistant I have made it a practice to provide her with some proper reading matter for home use in order to familiarize her with the general duties and conduct of a dental nurse. I find the Ritter Co.'s booklet entitled "The Dentist's Diplomat" very good, and in addition I include mouth charts, showing the position and names of teeth, as well as several articles of particular interest to the dental assistant. There are also one or two good books

that are very useful to her guidance. I find it helpful to keep all notes and booklets of interest to her in a special folder convenient to her use and for reference.

The first few days in a dental office are naturally confusing and quite trying for the new assistant and I find it advisable to see as few patients as possible in order to devote as much time as can be spared to her training. It will save the dentist a good deal of time and energy in the long run and greatly simplify his work if he would proceed in an orderly manner and according to a definite plan. It is very helpful to have a typed list of instructions of the assistant's regular duties. There should be a definite place in the office for all equipment or instruments and an orderly method of doing things. We should so organize our work that, if need be, we can carry on alone for a time or in the absence of the assistant and yet maintain efficient service.

From the beginning the assistant should be told just what is expected of her. First comes her deportment and attire in the office. The uniform she is to wear should be carefully selected. Tastes vary in the matter of cosmetics but there should be a clear and tactful understanding on that score. The manner of greeting patients and other callers and of answering telephone calls should be discussed and properly demonstrated. In my own office I have posted, in a convenient spot, a list of the assistant's daily duties and also a list of services for odd intervals. These act as a constant reminder and help to keep her occupied usefully.

Having outlined her duties at the outset I proceed to indicate the general layout of equipment and instruments and explain their purpose. First among her duties is the sterilization of instruments and their replacement in the dental cabinet. I have found it helpful to have each drawer numbered and have made a typed list enumerating the instruments and materials to be found there. Oper-

ating instruments, forceps, burs, stones, etc. all have a definite place depending on their type, size or purpose. All medicine bottles are clearly labelled and have their proper place. The assistant is taught the correct care of handpieces, the cleaning of burs and cement slabs and the care of other equipment as the occasion arises. It is hardly to be expected that she would remember all your instructions without some repetition, so, as an aid to memory, she should be given a notebook and encouraged to use it when necessary.

ADVANCED TRAINING

Following the initial days of training I proceed to instruct my assistant in the processing of x-ray films. I usually take four bite-wings of her own mouth and allow her to develop them. From day to day she is given more work to attend to until she assumes the full scope of her manifold duties. What these duties comprise may vary in different offices to some extent but there should be a definite division of labour between dentist and nurse. In some cases she may be expected to do simple laboratory work such as pouring impressions and investing small castings. Any intelligent girl should be capable of that. In many offices she is expected to take complete charge of all records and bookkeeping.

As a rule, I believe it's poor management to expect any girl to take full responsibility of your office records and accounting system but she should become sufficiently conversant with your method of charting and recording services so that she may save you much valuable time. Not until my assistant has become quite familiar with her general duties do I proceed to explain to her the business and record end of my practice. By that time she has learned to understand the names of teeth and surfaces as well as other terms used and can give more attention to the matter of records to the extent expected of her.

Gradually as the days go by she learns to become more helpful at the chair. The wide-awake assistant will soon become familiar with various operations and be ready to anticipate your wants without being requested. Instruments and materials then seem to flow to your working tray in just the right order and you are enabled to work with a minimum loss of time and energy. As dentists, we have only time and service at our disposal and it is imperative that we co-ordinate our efforts so that we may achieve the maximum of productive results. It is important for us to appreciate what Professor Walter B. Pitkin points out in his book "More Power To You" that ENERGY and POWER differ in human beings as in machines. "Power and energy must not be confused. Energy is the total working potential present in a given thing or person. Power is the work done under given conditions. Two engines using the same energy may differ enormously in power, for power is efficiency or end-result. So it is with plants and animals, including man. A person may have high energy and low power. Conversely he may have low energy and high power. With inferior volume of available drive he may get much more done than another man whose energy is much greater. . . . Energy once used can never be recalled."

For the average practitioner dentistry offers a fair livelihood and exacts considerable physical and nervous energy in return. Hence we should use all means at our disposal to conserve our energy for work that is essential and purposeful.

The dental assistant may be considered in the light of the efficiency engineer, standing between the dentist and wasted time. She is also the diplomat, using tact and understanding in dealing with patients. She should aim to cultivate a gracious and professional manner. A thorough knowledge of her duties and assurance of her own importance in the

office system will give her self-confidence and poise.

DAILY ROUTINE

The daily routine for my assistant starts at 8.30 in the morning and ends at 5.30 P.M. As a rule I arrive at the office a half hour later than she does which gives her time enough to tidy up and have things in order. After airing the office she checks the appointment book and selects the working charts for the day, placing them near at hand in the order of the patients' appearance. It is her duty to receive and dismiss patients, arrange appointments, send out statements and make out receipts for all payment of accounts. She also records all entries on the day sheet. It is part of her duties to send courtesy notes, acknowledging the referring of patients, and to recall patients for periodical examination and prophylaxis. In brief, she is occupied all day long by the varied nature of her work, either as receptionist, secretary, operating assistant or general housekeeper for the office.

TEN POINTERS

By way of stimulating the assistant to greater effort and efficiency, here are ten pointers which I think should help to improve the average girl and keep her on her toes.

1. THINK. Don't do things mechanically; keep your thinking cap on!

2. BE ALERT. Use your eyes and ears to develop your powers of observation so that you will know what the doctor is doing without being told.

3. Learn to ANTICIPATE a request; the assistant should become so familiar with ordinary dental procedure that she should not have to be asked for materials and instruments commonly used for fillings, extractions, etc. Beat the dentist to it by a head start; don't rush for things he's already reaching for.

4. Be SURE of what you are doing or where you replace instruments and other

things. It's better to admit you don't know and be corrected than to go on blundering and waste your time and the doctor's.

5. Be CONSERVATIVE of the doctor's time, energy and materials as you would be of your own.

6. DO FIRST THINGS FIRST. Learn to do the things that demand immediate attention first and other things in order of their requirement.

7. CULTIVATE and MAINTAIN a SENSE OF ASEPSIS and cleanliness in the office at all times. For instance, don't handle gauze, cotton, sterilized instruments, etc. without first washing your hands. It is just as important for the dental nurse as for the dentist.

8. FIND WORK TO DO. There's always something to do about a well regulated office. Keep a list of daily duties, another list of things that can be done between patients or while the doctor is busy at the chair and still another list of things that can be done when you have a whole morning or afternoon or perhaps a few hours to yourself.

9. PRACTISE SELF CONTROL. The competent dental assistant should be well poised through self assurance and a keen knowledge of what she is about. Many girls flutter about in a make believe attempt at being busy while actually accomplishing little. The alert assistant does not remain transfixed while watching the dentist operate or just sit aimlessly at the desk, admiring her finger nails. She keeps one eye on the doctor and patient and another on the office records or the reception room or the sterilizer or other things that require attention. Through proper use of her senses she helps to keep the office machinery running smoothly yet does not wear herself out in the process.

10. THE IDEAL ASSISTANT has the quality of LOYALTY and enthusiasm for her work. She learns to enjoy her work and appreciate her importance in

the scheme of things. She is richly entitled to a just recompense for the valuable nature of her services. The success of the dentist should be her success too!

COMPENSATION

Now what, in turn, may the assistant expect of the dentist who employs her? In this, as in other human relations we should do well to follow the Golden Rule. Treat your nurse with the same courtesy and consideration as you would expect of her. Be patient, particularly at the outset, and don't be too ready to blame her for everything that goes astray in the office. She should, however, expect helpful advice and constructive criticism and be able to "take it".

The dentist should encourage his assistant to constant improvement by giving her appropriate reading material, by explaining things about the office that are of interest to her, and by giving her credit when credit is due. We all want appreciation, and the girl who feels that her services are well regarded will take more interest in her work, show greater enthusiasm for it and be more loyal to her employer. A competent nurse should display initiative and any suggestions she may offer ought to be carefully considered. She should be looked on as a co-worker rather than as a paid servant.

And in return for her services she should receive adequate remuneration dependent on her experience, length of service and value in the office as well as gross income of the office. It is a fair guide to set her monthly salary at approximately 10 per cent of the gross monthly receipts. Naturally, not all dentists place the same value on the services of the assistant and not all girls are helpful to the dentist in the same degree. But it is a recognized fact that the competent nurse contributes much to the success of a practice and she is entitled to share in the monetary fruits of her labour. In some offices she profits also through a bonus

The Role of the Dental Assistant

arrangement, receiving a percentage of the gross income above a set objective. This acts as an additional stimulant to greater effort and is a fair means of compensation.

The dental assistant who is content with her work radiates cheerfulness and friendliness. She is indispensable in handling children and nervous people. She adds prestige to a dental office and lends it an air of refinement. She should count her returns not merely in dollars and cents but in the satisfaction of her work, the training and experience gained thereby and by the stimulation of her environment to self-development and rounding out her personality.

As for us as dentists, let us remember that no one crosses our path without influencing us in some way. We are constantly being modified by our environment and through the contact with the people with whom we associate; and not the least of these is the dental nurse whom we see all day long. So it is well that we choose our assistant carefully and train her diligently that she may be in harmony with our concepts and ideals and help us to build and maintain the kind of dental practice that will make our daily work something to look forward to with pride and anticipation of work well done.

4857 Sherbrooke Street, W.

Conventions

18TH ANNUAL FALL CLINIC OF THE MONTREAL DENTAL CLUB, MOUNT ROYAL HOTEL, MONTREAL, SEPTEMBER 23-25.

A full program of papers, clinics, and demonstrations is being prepared by the Committee for the meeting. The preliminary program will appear in this Journal at an early date, and anyone desiring a copy of the same is asked to apply to Dr. M. L. Donigan, 1414 Drummond St., Montreal, Canada. Exhibitors desiring information regarding space, rates, etc., are asked to write Dr. J. A. Carney, 5292 Queen Mary Road, Montreal.

EASTERN ONTARIO DENTAL CONVENTION, HOTEL MANITONNA, BROCKVILLE, OCTOBER 18-19.

A fine program is being arranged.

AMERICAN DENTAL ASSOCIATION CONVENTION and the MEETING OF THE AMERICAN ACADEMY OF PERIODONTOLOGY scheduled for Boston later this month have been postponed "for the duration."

Some day—and it cannot come too soon—the efficacy of a dental program will be judged not by the number of children that are induced, through one method or another, to undergo their first or sporadic experiences in the dentist's chair. Rather will it be judged by the number that start and continue the visits as a way of life.—Nathan Sinai.

The saying that a little knowledge is a dangerous thing is, to my mind, a very dangerous adage. If knowledge is real and genuine, I do not believe that it is other than a very valuable possession, however infinitesimal its quantity may be. Indeed, if a little knowledge is dangerous, where is the man who has so much as to be out of danger.—T. H. Huxley, in Dental Record.

Cast Gold Restorations*

by W. R. WATCHLER, D.D.S., Yorkton, Saskatchewan

IT HAS often been stated that the cast gold restoration in the hands of a capable operator is the means par excellence for replacing lost tooth structure. Much work has been done to make this ideal restoration available to every dentist. The materials and methods have been greatly improved and standardized; resulting in better restorations and fewer failures.

Dr. Mylander has said that "In inlay technique, the most important step in a satisfactory gold restoration is the preparation of an intelligently extended and definitely clean cut cavity with polished enamel walls and sharp cavosurface angles. Here the ideal is established and the first link in the long technique is secure and sound."

CAVITY PREPARATION

The form for the cavity preparation is influenced by the particular case in hand and will necessarily be planned by the operator with regard to the tooth form and stress to be overcome. We should strive to reproduce the functional and aesthetic form of the tooth and restore its biologic state.

All decay should be removed from the cavity, the dentine sterilized and a proper base placed. The base should protect the pulp and fill all undercuts. The cement used for the base should be mixed to a heavy thick mix which will cause a minimum of acid irritation to the pulp. If the cavity is very deep it is advisable to use a pulp capper. A pulp capper which I have found satisfactory is made of thymol, zinc oxide and eugenol. This capper is in the crystal form but upon

being touched with a small heated ball burnisher will liquefy. When applied to the cavity it quickly solidifies again. This base should be covered with cement. The cavity preparation should be finished in the cement as though it were tooth structure.

In 1928 the National Research Committee of the American Dental Association established a fellowship in the Bureau of Standards where dental materials and methods are tested. The information which they have is available to all.

The Bureau of Standards has given us tests to show that a temperature rise of 27 degrees F. will occur in five seconds where an inlay rests directly on the dentine of the tooth. If a one-sixteenth inch cement base is placed between the dentine and the inlay, it will require thirty-five seconds, or seven times as long, for the same temperature rise. A base of one-eighth inch thickness will increase the time to produce the same temperature change, eighteen times.

This is important to remember if inlays are to be made that are not sensitive to temperature changes.

WAX PATTERN

After the cavity preparation has been completed our next problem is to obtain an accurate wax pattern. This may be accomplished by using the direct, the indirect or the indirect-direct method. The method of obtaining the pattern should be the method that the individual operator can most easily master. Personally, I prefer the direct method for all simple

*Presented before the Winnipeg Dental Society.

W. R. WATCHLER



inlays, while for more extensive inlays such as mesial-occlusal-distal, $\frac{3}{4}$ crowns or full crowns, I feel the indirect method is much more simple and accurate.

When the indirect method is followed, always finish the pattern on the tooth. If there is an error in the die this can be corrected before the pattern is cast by finishing the pattern in the mouth. The extensive pattern can more easily and accurately be made on a die than in the mouth, thereby saving considerable time at the chair which is an important consideration for the patient as well as for the operator.

For accuracy and economy we should become proficient with the method that requires the least number of steps with the expenditure of the minimum amount of effort and time. The direct technique should be the method of choice in all simple cases. The wax pattern is more frequently responsible for inlay failure than the casting technique. Scholten,

states that: The outstanding causes for inlay failure are: (1) failure to extend and obliterate susceptible areas (2) failure to so make the preparation so as to permit the removal of the wax pattern without distortion (3) failure to extend the margins to permit proper finishing and contour.

In obtaining the wax pattern the physical properties of the wax should be understood. An inlay wax should possess a minimum amount of flow at mouth temperature. The maximum flow should take place at a slightly higher temperature. A wax of this type is plastic enough to allow taking fine impressions without a great amount of heating. The temperature range between the rigid and plastic states does not exceed eight degrees F. In the direct inlay technique, shrinkage of the wax is increased, as the temperature range is increased. It should be sufficiently rigid at room temperature to withstand handling without distortion.

The use of a matrix is of assistance in obtaining better adaptation of the wax to the cavity walls and margins. The matrix should be loosely fitted to the tooth. The wax may be softened in a warm water bath, in an electric furnace or by the open flame. I have been using the open flame. Work the wax between the fingers until it is quite plastic. When it is at the proper plastic state, force it into the cavity and hold it there under pressure, while pressure is being applied tighten the matrix. This brings pressure to the cervical portion of the pattern. When the wax has cooled, remove the matrix and wax together. Using a slightly softer wax rebase the gingival and gingival proximal portion—heat slightly and force into the cavity again until cool. Remove and trim off the excess wax with a sharp knife. Replace in the cavity and carve up the occlusal and finish the proximal and gingival margins. Narrow strips of China silk and silk sewing thread will assist in finishing the proximal area. The margins should be burnished with a slightly heated plastic instrument. Every wax pattern should be finished as accurately as the finished inlay. It is easier to work in wax than in the gold casting. In removing the finished pattern from the cavity a fine explorer should be used to avoid distorting it. Using the low heat treated wax the pattern will contract about 0.4 per cent while cooling from mouth to room temperature. When we take into consideration that the wax shrinks 0.4 per cent it becomes apparent that the pattern should be rebased.

Wash the pattern with liquid soap and water using a fine camels hair brush to remove blood and tooth particles. Blood retards the setting of the investment and will cause rough spots on the casting. The sprue is now attached to the pattern. The sprue may vary in size from 11 to 17 gauge depending upon the size of the pattern. The larger the sprue the shorter

time is required for the gold to fill the mould. A ball of wax is added to the pattern at the point at which the sprue is to be attached. Hold the sprue in the flame until warm enough to become attached to the ball of wax. Using the ball of wax will greatly reduce the danger of distorting the pattern. The pattern should be invested immediately. The practice of investing the pattern at a later time does not make for accuracy.

The pattern is now the exact size of the cavity at mouth temperature. The amount of change or shrinkage is dependent upon the wax used and the room temperature. Waxes accepted by the Bureau of Standards have an average expansion of approximately 0.02 per cent of each degree F. of temperature increase in the range employed in inlay technique. These waxes expand 0.22 per cent in the range between 64 degrees and 84 degrees F.; 0.42 per cent in the range between 84 degrees and 104 degrees; 0.50 in the range between 104 degrees and 124 degrees, more than double the amount occurring in the first 20 degree range. The shrinkage of gold in the casting process is about 1.25 per cent. Given a slightly smaller pattern we must produce a mould sufficiently enlarged to compensate for the shrinkage of the gold and the wax.

The pattern may be expanded by bringing the temperature of the pattern to mouth temperature. This may be accomplished by placing all the investment materials as well as the pattern in an oven at about, or slightly above, mouth temperature.

INVESTMENT

There are a number of investments on the market which meet the requirements of the Bureau of Standards. The manufacturers supply instructions and data covering their products. From this data we know what to expect as to setting and thermal expansion. The procedure of

loosely lining a ring with wet asbestos will produce a setting expansion of from 1, to 1.5 per cent. If the asbestos is firmly fitted to the ring the expansion must take place mostly toward the ends of the ring and distortion of the casting will result. A loosely placed asbestos lining will permit expansion to take place in all directions and an accurate casting will be obtained. The accepted investments show comparatively smooth thermal expansion curves. The expansion increases evenly from the point at which the moisture is eliminated until the ring is ready for casting at about 1300 degrees F. This expansion of the investment can be varied by the investment used, and the water-powder ratio, and the manner of spatulation. The amount of setting and thermal expansion of the investment increases when the amount of water is decreased in the mix and likewise decreases as the amount of water in the mix is increased. In other words a thick mix will give us more setting and thermal expansion than a sloppy mix.

In investing and burning out the pattern we wish to compensate for the shrinkage of the gold in the casting process and the shrinkage of the wax from mouth to room temperature and to allow for an inlay which will be 0.05 per cent smaller than the cavity. In the inlay type we want the casting slightly smaller than the cavity while for crowns and M.O.D. inlays we wish to have them slightly larger than the preparation.

We should obtain all the setting expansion possible and a sufficient amount in the thermal expansion to meet the needs of the restoration in hand. If we have a simple inlay we do not require quite as much expansion as if we are constructing a more extensive pattern such as the M.O.D. or crown.

The process of investing the pattern should be definitely standardized. The investment powder should be weighed and

the water measured according to the instructions furnished by the manufacturer. Distilled water should be used as in some localities impurities in the water will influence the setting of the investment. The investment and water should be kept at room temperature. The water and investment should be thoroughly mixed until a smooth bubble free mix is obtained. Apply the investment to the wax pattern with a fine camel's hair brush, pushing the investment ahead of the brush in such a way that no air bubble will be trapped. When the pattern is carefully covered, the investment is vibrated into the asbestos lined ring. The asbestos lining is important if we wish to obtain even expansion in all directions. The invested ring is allowed to set for about 25 minutes before starting the burning out process.

CASTING

The ring is then slowly heated until the moisture and wax are eliminated—after which the ring may be carried to casting temperature 1300 degrees F. in a short time. The ring should be cast immediately after being removed from the flame if we wish to utilize all the thermal expansion available. In casting the ring a reducing flame and flux should be used to prevent oxidation and the gold kept at the lowest temperature consistent with ready flow into the mould. When this investing and casting technique has become satisfactory it should be definitely followed.

The gold to be used naturally varies with the type of restoration. The soft gold is suitable in some cases while a hard gold is indicated where more stress is to be withstood. A gold recommended for inlays by the American Association is made of 90 per cent gold; 7% copper; 1 per cent platinum; and 2% silver.

The casting should be cleaned by pickling in acid to remove all investment. Dipping the casting in powdered salt-

peter will greatly lessen the danger of burning or rounding the margins while flaming the casting. The saltpeter has a tendency to cause the acid to sputter which is a decided disadvantage.

SETTING AND FINISHING

The setting and finishing of the inlay is our next consideration. The inlay is seated by gently tapping to place. The margins, contact and occlusion should be checked. Before cementing the inlay finish all margins with stones, disks and strips, drawing the gold against the margins. When this has been done the inlay is ready to cement in place. The cavity is now sterilized and dried. For this purpose use alcohol. Both oxyphosphate of zinc and oxyphosphate of copper cements are satisfactory.

The mixing of the cement is very important. The very best cement can be ruined in the process of mixing. A generous amount of powder and liquid is placed on a clean slab. A small portion of powder is placed in the liquid and thoroughly spatulated. This is repeated until a smooth creamy mix is obtained. The cement should be thoroughly mixed to the maximum consistency that will permit seating of the inlay. Thoroughly cover the inlay with cement and force it into place by again tapping with an orange-wood stick and mallet. Before the cement hardens, again run over the margins of the inlay to draw the gold in contact with the tooth, thereby eliminating the possibility of the cement line. Apply the final polish with the use of wood points, paper disks, felt wheels and rubber cups. The use of a polishing powder with the wood points, rubber caps and felt wheels will give a beautiful finish to the

gold which is less conspicuous than a poorly polished filling. The finishing of the inlay should receive the same careful attention as the other steps of the technique.

INDIRECT METHOD

I employ the indirect method in the more extensive inlays and crowns. I prefer the use of compound in obtaining the impression for the model; except in cases where the tooth is very bell shaped, then I use the elastic compound. The compound has a shrinkage of from 0.3 to 0.4 per cent when cooled from mouth to room temperature. Wax shrinks from 0.4 to 0.6 per cent. Elastic compound has a shrinkage of from 0.6 to 0.8 per cent. This indicates that the compound gives us the least shrinkage of any of the materials in use.

The success of the indirect method depends upon the accuracy of the model obtained. Modeling compound impressions taken with well fitted bands and held under pressure while cooling will produce a good model. Pack the impression with artificial stone or model alloy. (Model alloy if time permits.) The model should be thoroughly oiled after removal from the impression. From this point the technique should be the same as in the direct method.

The cast gold restoration is one of the most exacting parts of our work yet gives us the greatest degree of satisfaction and pleasure when carefully executed. It is my hope that you will suggest more gold restorations to your patients, instead of the alloy and cement fillings that are often placed. The standard of your work will improve and you will derive more pleasure from your labour.



Do not burn or destroy this publication. Sell it or give it to a salvage organization. It is needed for victory.



Some Things Observed or Learned in the Hard School of Experience

"Experientia docet stultos"

by WILLIAM A. BLACK, M.A., D.D.S., Toronto, Ontario

WHEN asked permission to publish some of the items in this paper I hesitated at first, but on reflection, thought if they would be of any benefit or value to some of the younger members of the profession who have yet to make many of their mistakes, I would be glad to set them down as sign-posts along the highway of life and would feel well repaid for any time spent in doing so, if they proved helpful to even one reader who scans these lines.

"Experientia docet stultos" — experience teaches fools, but does it? I wonder! To me it seems that only the wise profit by their experience. The foolish ones keep on repeating their mistakes over and over again. But the wise ones make lots of errors too. President Roosevelt has said that if he is right fifty-one per cent of the time he considers he is doing pretty well. Lincoln, when told by a friend that Seward, one of his chief political rivals, had said that he was a damned fool, replied: "Did Seward say that?" and his friend said, "Yes, sir, he did." Lincoln paused for a moment and then remarked: "Well, if Seward said that, I guess I must be one, for Seward is usually right!" If men of this calibre feel this way, what hope is there for us ordinary mortals to escape the pitfalls of life? "To err is human," seems to sum up the situation pretty fully. It has been said that the man who never made a mistake never made anything. It often happens while one is overcoming some recognized bad habit or mistake and busy

patting himself on the back at his success in doing so, he unconsciously is doing something else just as fatal. So there you are! or where are you?

Some one has well said that the most uncommon thing in the world is common sense. Many of the things I have written down are commonplace which he who runs may read. Some few there be who profit by other people's mistakes and follies, but the great majority of us are forced to learn our lessons through the hard school of experience and "skinning our shoulder against the wheel of the world." Knowledge comes, but wisdom lingers is a truism. Yet some of the things I am setting down may bear re-statement. Mr. Charles Fillmore, head of Unity School, said on one occasion that after giving a lecture before some five hundred students, several of them came forward to meet him and he found in talking with them that each one had taken a different shade of meaning from what he had intended in his address, so he suddenly realized that he had given five hundred different lectures that night. And so it may be with the readers of this article. Some will say, anyone with a grain of common sense knows these things anyway. Others will doubtless say, he is right about not lending money to friends! Still others will think this fellow is in his dotage writing stuff like this! And they all will be right according to their own interpretation of what I have written.



WILLIAM A. BLACK

SOME THINGS OBSERVED OR LEARNED
IN THE HARD SCHOOL OF EXPERIENCE

1. The money we get the most satisfaction out of is the money received as a result of our own honest efforts. "Easy come, easy go."

2. Protect yourself and family with insurance and also buy an annuity starting as early as possible. Make these your first commitments.

3. Live within your income, even if you have to go without accustomed luxuries—a very hard thing to do! Luxuries soon become necessities.

4. Never mind "the Joneses"—go your own way and some day they will have a heck of a time keeping up with you, instead of you chasing them.

5. Never envy the other fellow for he is having his own troubles. If you knew his problems, you would not care to change places with him.

6. Guard well your health. Like every other good thing in life, we don't appre-

ciate it until we have lost it and it is perhaps too late to recover it.

7. Never lend money to friends, if you wish to keep them—and your money. Better far to give it to them, if it seems necessary and you can afford to do so. Conduct your business with friends in a business like manner.

8. If you would have friends, be friendly. Be a good listener and talk about the things in which the other fellow is interested. He is more interested in himself and his doings than he is in you.

9. Never advise or urge others as to investments. If they follow your advice and their investment turns out well, they showed good judgment. If they lose their money, they blame you for your gratuitous advice.

10. Never make an investment without considering fully the pros and cons. Ask others who know something about its possibilities, but in the final analysis make your own decision and follow your own considered judgment.

11. Never invest more than you can afford to lose in any speculation—no matter how alluring. Never put all your eggs in one basket. It might break, and break you!

12. If investing for speculation and profit, be satisfied with a reasonable return. No one ever went broke taking profits. Sell with the idea of giving the other fellow a chance to make something on his venture.

13. Having made a speculation, count it a loss until it has proved otherwise.

14. Never worry over investments or speculations once they are made. It is futile to cry over spilt milk!

15. Money is not the true criterion of success—did you ever see a millionaire who was happy, when you got to know him? Not unless he was using his wealth for the benefit of his fellow man.

16. If you can't meet your financial obligations when due, always tell your creditors so, in advance. They will appreciate your courtesy and thoughtfulness and you will keep your credit good—even at the bank!

17. Hold no resentment or malice against anyone—it only reacts on yourself causing illness and unhappiness. Don't let hate be any part of your life. The late Will Rogers said that he had never seen anyone that he did not like.—Love your enemies and you will have no enemies.

18. Never malign anyone or misjudge his motives. Say nothing behind one's back that you would hesitate to say to his face.

19. Discuss with people, but never argue with them, for it only tends to confirm them in their own opinions and makes them feel antagonistic towards you. They think that you are combative and unfriendly.

20. Never worry over past mistakes. Worry only unfits one for the duties and opportunities of the present. Use your mistakes as stepping-stones to higher achievement. They may thus become assets to you and to others. "Every day is a fresh beginning, every morn is the world made new."

21. Try to forget your troubles by

helping others who have greater ones and thus win out vicariously.

22. Happiness cannot be found in itself, but is always a by-product of right thinking, right living, honesty and usefulness to others. "To thine own self be true and it must follow as the night the day, thou can'st not then be false to any man."

23. Realize that life is spiritual. Material things while necessary are but temporary and secondary. We brought nothing into this world and we can take nothing out of it—except our characters.

24. Try to help some one definitely each day and thus sublimate your own troubles.

25. Never betray a confidence, but hold it as a sacred trust between you and your confidant.

26. Respect yourself, if you would have other people respect you.

27. Have one or more hobbies—ride them, but don't let them ride you. Get all the fun and enjoyment out of life each day as it comes. We pass this way but once. Don't put off until tomorrow what you can do today.

28. Guard carefully your thought processes for, out of these flow the issues of life. "As a man thinketh, so is he," is still true.

29. Believe in the gospel of the second chance. Many men who at one time were failures, through their later efforts crowned their lives with success. A man has never failed until he has ceased trying.

30. Finally, fear God and honour your King and Country!

We shall not pass this way again,
So any good thing we can do,
Let's do it now, not wait till when
It is too late to help some human need.

We shall pass through this world but once,
So any kindness we can show,
Let's not defer it for the nonce,
Until too late to lift another's load.

(Based on the words of Etienne de Grellet who fled France during the revolution to America where he became a Quaker.)

The Forum

• A NEW WAY TO PREVENT DENTAL CARIES

by ALFRED KRAUS, M.D., Prague

(Condensed from *British Dental Journal*,
March 2, 1942.)

IT IS generally agreed that oral hygiene as it is exercised nowadays, has not the slightest effect in preventing dental caries.

If a tooth with superficial caries is immersed in a solution of acid, e.g. lactic acid, the normal enamel will gradually be dissolved while the carious area withstands the attack of the acid for a considerable time. Beneath carious lesions in the enamel or the dentine there are found homogeneous so-called translucent zones. Most authors consider that these zones arise as a result of neutralization or decrease of acidity in the layers concerned. This neutralization or diminution of acidity causes a recombination of the calcium salts, previously dissolved by the acid which has penetrated into the tissues, with the proteins of the organic matter or a precipitation of these salts inside the prism sheaths or dentine tubules respectively.

The chemical laws governing calcification of the organic matter apply equally to the superficial enamel and dentine and to the deeper layers of these tissues. Therefore it must be possible by neutralizing or diminishing the acidity at superficially decalcified areas, to achieve a homogeneous calcification, better than that of the normal tissue.

By the refixation of calcium in the organic matter and the precipitation of calcium salts in the superficial parts of the prism sheaths or dentine tubules, further penetration of acid or of carbohydrates is inhibited and thus a condition is created which favours the recalcification of the organic matter.

From this follows the general rule that

a transient neutralization or diminution of acidity, at a spot of incipient caries not only inhibits the caries, but also raises the resistance of that spot to acids to a degree higher than that of the neighbouring non-carious tissue. In other words: every neutralization or reduction of acidity, however transitory, at an area of incipient caries is caries prophylaxis.

We know, however, that alkaline dentifrices have not the slightest effect on caries, due not to the short time during which the dentifrice acts, but to the fact that the weak diluted alkali of these dentifrices is not able to penetrate the plaque and so reach the surface of the tooth but causes the plaque to swell and thus obstruct the penetration of the alkali to the effected surface.

I made pastilles containing 0.5 grm. of a mixture of calcium lactate, potassium lactate and sodium lactate, the latter previously having been brought to an acidity of about 5.6 pH by adding sufficient lactic acid to make the ratio of sodium lactate to lactic acid 100 to 1. When the pastille is dissolved the presence of an excessive amount of alkali lactates in the pastille ensures that this small quantity of acid is almost completely in an undissociated state. Moreover the lactates of the pastille must have a buffering effect on the free lactic acid which, generated by fermentation, is present under the plaques at the carious areas, and they thus must reduce the acidity at these areas. The undissociated lactic acid thus produced under the plaque, is not only harmless but has, as already stated, an inhibiting effect on lactic fermentation.

In this way a recalcification is probably brought about at places of incipient caries which, for the reasons given, should render these places more than normally resistant to acids. It is not unreasonable

to, expect, therefore, that if such pastilles are chewed regularly at reasonably short intervals, e.g. once a day, caries could be intercepted from its very inception. If therefore, these pastilles are claimed to have an inhibitive effect on caries by bringing about recalcification, they ought simultaneously to remove or, at least, diminish the hypersensitivity of carious dentine.

One case is reported of incipient cervical caries making chewing difficult. One pastille used every evening and kept in the mouth for ten minutes resulted in complete loss of sensitivity in a week.

Another case complained of great sensitivity to sweet things and cold. This patient chewed one pastille on each of ten successive evenings. Following one treatment sensitivity had diminished and had disappeared after two treatments. Two months later a slight sensitivity reappeared but vanished after using one pastille.

In other cases carious dentine was extremely sensitive. The patients were told to chew one pastille or let it dissolve in the mouth and not to swallow for ten minutes, following which it was possible, to excavate the cavities without pain.

Editor's Note:—*It is doubtful whether potassium lactate can be readily obtainable in this country at the present time. However, the theory advanced in this article is interesting and perhaps some other drugs may have the same effect.*

• CALCIUM METABOLISM, PREGNANCY AND CARIES*

(Bulletin of the Committee on Pharmacy and Therapeutics of the University of Illinois.)

THERE is current a popular though incorrect saying that is used frequently and uncritically by both the medical and dental professions: "A tooth for every child." In the face of good evidence to the contrary, this saying has been strengthened through unquestioning re-

iterations which has led to irrational therapy.

The aphorism was originally based upon a number of erroneous concepts which have since been corrected by scientific investigations. The first of these is that calcium withdrawal is possible from the teeth just as it is possible from the bones. Since the bone acts as a storehouse of calcium to be drawn upon when the need arises in the organism, many men have placed the teeth in the same category, forgetting that while the bone is a vital cellular structure, both enamel and dentine are avascular and acellular. In fact, enamel is a dead structure not even having encapsulated within its substance protoplasmic processes (dental tubules) as does the dentine. Calcium withdrawal is made possible from the bone not through any mysterious process of decalcification but by the process of resorption by osteoclasts. For this process to occur, the tissue must be vascular and cells must be in close approximation to it. These conditions obtain only to a very limited degree in the dentine and are absent in the enamel. In fact, physiologic resorption occurs only in the deciduous teeth. The fundamental differences between bone and teeth are completely disregarded in the concept that calcium withdrawal is possible from the teeth. There is no evidence to support this assumption nor any scientific mechanism to explain it.

The second misconception upon which the saying is based is that caries is related to calcium metabolism. The mechanism of this relationship is not made clear by any adherents to this theory and none has been established. Caries is certainly not caused by an internal withdrawal of calcium from the teeth. Caries is a bacterial infection of the enamel and dentine and begins at the surface of the tooth.

The calcium needs of the mother are increased during pregnancy. The fetus

*Bulletin No. 15. Manuscript submitted by Dr. Isaac Schour, Department of Histology, University of Illinois College of Dentistry.

is a parasite which lives upon the mother and obtains its nourishment directly through the blood stream, regardless of whether its dietary elements are ingested by the mother or taken from the mother's tissues. However, the total amount needed by the fetus is relatively small in relation to the total body calcium of the mother.

The full-term infant weighing 3,000 grams contains approximately 24 grams of calcium. The average woman has 2,000 to 2,500 grams of calcium, of which 97 to 98 per cent is within the bones and less than 1 per cent in the teeth. The total calcium need of the fetus is therefore 1 per cent of the mother's storehouse. Such a drain is not serious. However, for the safety of the general health of both the mother and infant it is essential that the calcium intake of the pregnant woman be increased to a minimum of 1.5 grams per day.

Under various conditions 10 to 40 per cent of the calcium is retained, so that during the last five months of pregnancy the mother retains at least the amount of calcium needed by the fetus. Usually an excess is retained and stored in the maternal reserves. There is no reason to believe that, except under severe dietary restrictions, the fetal calcium needs must be obtained from the maternal reserves in the skeleton. It certainly cannot be obtained from the teeth. However, since the alveolar bone which supports the teeth is the most viable of bone, it is possible that the alveolar bone might suffer first in cases where calcium must be obtained from the osseous structures because of a failure to absorb it by way of the gastro-intestinal tract. Intraoral x-rays of pregnant women do not support the thesis that bone destruction is common during pregnancy. As a matter of fact, the literature does not contain any evidence that alveolar destruction is more common during pregnancy than at other times.

The relationship between pregnancy and caries has often been pointed out by both physician and dentist to the pregnant mother. As a result, she has come to expect the loss of a tooth or many teeth as an additional sacrifice which she must bear for her unborn child. Clinical investigations reveal the fact that caries is no more prevalent in pregnant than in non-pregnant women of the same age. This does not mean that caries does not occur in pregnant women. But when it does occur to any unusual degree it can almost always be related to the poor oral hygiene associated with the sordes and acid metabolites from the nausea and vomiting and with the general lassitude of the pregnant mother.

Gingival involvements do occur in a relatively mild form (pregnancy gingivitis) during pregnancy, due either to the above-mentioned local factors, or to the temporary endocrine imbalance. This gingival condition is neither serious nor difficult to eradicate, and normally disappears after term.

While periodontal disease, especially alveolar atrophy, is theoretically possible during the pregnancy period, it is actually rarely associated primarily with the pregnancy and then only when other and more direct aetiological factors in the production of periodontal disease are present. The vague and uncritical use of "disturbed calcium metabolism" should not be invoked to "prove" any such hypothetical relationship.

There is no question that the pregnant woman should have good dental attention, but there is no reason to believe that she will nevertheless suffer unduly from dental disease as a result of her pregnancy. The incidence of caries and periodontal disease during pregnancy is no more nor less than during the non-pregnant period. The statement "A tooth for every child" is a dental myth.—*Fortnightly Review of Chi. D. Soc.*, Feb. 1, 1942.



PRINCE EDWARD ISLAND



Editor—M. H. GARVIN, Winnipeg

SASKATCHEWAN



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QUEBEC



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ALBERTA



John Clay, Calgary

MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



H. M. Cline, Vancouver

Dental Education

In this issue of the Journal appears the address by Dr. Woodbury given before the Canadian Dental Association in May. In this address timely emphasis is placed on dental education, and some pertinent questions are submitted or implied; such as: Should dental students be taught to treat conditions before they understand them? How long can dentistry pose as a learned profession if its members are trained mainly to practice a craft? Why has a large part of dental investigation been concerned with materials rather than biological and disease processes, in other words with invention rather than research? Must dental education undergo a transformation from within?

Dr. Woodbury points out that from an educational standpoint the difference between the doctor and the dentist seems to be that the budding doctor spends at least two years dipping deeply into the general reservoir of the medical sciences without being distracted by the procedures of therapeutics, while the budding dentist dips as deeply as he is able considering the fact that while he is doing so he must carry an initial load of therapeutics in the form of dental techniques that may total as much as one thousand hours. Dr. Woodbury concludes with the admonition that as technical

accomplishment will not solve our problems that we must face up squarely to the question of the cause of the ills we are treating.

It is to be hoped that all our readers will peruse this fine address which is so filled with food for thought. We all know that there are some prominent men who would like to see dentistry united with medicine and the dental profession discontinued as a separate organization, but we can assume that human nature has not changed so rapidly recently that we can afford to entrust our honourable profession, a profession which has grown by leaps and bounds during the past hundred years, to the profession of medicine which has been traditionally indifferent to us and our welfare.

It may be a risky digression for an editor to offer even a partial solution to this intricate problem, however it may prove helpful to suggest certain procedures and encourage our readers to draw their own deductions.

If the dentist must dig deeper into the reservoir of medical sciences then let him dig. An M.D. degree or a knowledge of the minute anatomy of the extremities will not make for greatness in the practice of dentistry. Perhaps that thousand hours spent on dental techniques could be greatly reduced by planning to make the student familiar with mechanical procedures, their uses and limitations; but that he should not be required to make dies and counter dies, vulcanize and polish dentures, solder complicated appliances and many other similar procedures. Let this be optional. Even now the ideal practice of dentistry does not call for the necessity of doing any of these procedures. The progressive dentist will have all this work done by a technician. The medical school does not demand that the student put in many hours of manual training at carpentry so that he will be able to make splints.

Then again, if technicians are to play this important part in dental practice why should they not be trained under dental direction instead of by the haphazard plan in vogue at present? A short time ago one of our own technicians applied for certain information about porcelain bridgework from one of our dental colleges and the information was refused because no provision had been made for any such service. Such procedures do not stand for progress.

This is not the time to increase the cost of dental training. It is the time to be practical, to so train our men that they can hold their heads as high as the members of any other profession in existence; that when they commence practice they will have access to the services of a highly trained body of organized technicians under the control of dentistry; that they will have access to the services of adequately-trained dental hygienists and dental assistants so that the financial rewards associated with practice will make an appeal, as well as the appeal of ideal service to humanity. In this way dentistry will attract many of the brilliant minds among our growing youth, men and women who will bring honour and renown, not only to themselves, but to the profession of dentistry.

Notice to Members of Dental Corps Overseas

Some months ago it was suggested by Lt.-Col. Trelford, officer commanding the Dental Corps overseas, that the number of copies of the Journal being sent over there be curtailed. He stated that he had discussed the matter with the company commanders and that it had been decided that distribution of Journals could be made to all officers by mailing same to the list of addresses he included in his letter, the total of which numbered about thirty.

This was a fine gesture by this thoughtful dental officer in that not only expense of producing the Journal will be reduced but shipping space will also be conserved.

Our Business Manager, Lt.-Col. Moore, took this problem up with Headquarters at Ottawa and it was agreed that this plan should be adopted, nine more names being added.

It is apparent that extra copies of the Journal sent to individuals could not be kept and would be of no value as a matter of record, however if the names and permanent addresses of dentists overseas can be secured, Lt.-Col. Moore will see that monthly copies of the Journal are sent to these addresses. At the present time a large number of dentists are taking advantage of this procedure. In other words, if every dentist overseas will send in his permanent address in Canada, the Journal will be mailed there. The thirty-nine copies which are to be mailed overseas will be additional copies for the use of the members of the Corps.

This arrangement will go into effect with this issue of the Journal.

CORRESPONDENCE

GREETINGS FROM BRITAIN

To the Editor, Journal of the C.D.A.

As one of your British Correspondents, and at the same time President of the British Dental Association, I feel it is opportune to send fraternal greetings and good wishes to the Canadian Dental Association from your confrères on this side of the Atlantic.

I expect you would like to know how our profession is playing its part in the national effort in these times of world crisis. We are responsible for the maintenance of the dental health of two great sections of the community, the armed forces and the civil population. Many hundreds of our best and most energetic men are now giving whole time service to the forces. They are doing splendid work in all sections, whether it be treatment of maxillo-facial injuries, ordinary dental surgery, conservative dentistry or prosthetics. I

have, myself, seen some of the treatment centres and can testify as to the great quantity and the high quality of the services they are giving.

The withdrawal of so many dentists for the forces naturally throws more responsibility on those who are attending to the civil population. These dentists are very busy, in fact most of them are working harder than they have ever worked before. The absence of unemployment and the diffusion of money in wages has encouraged the appreciation of dental services on the part of the civil population. Taking all the circumstances together I am sure that the dental health of the nation, including the forces, has never been so well conserved as it now is in war time.

I, myself, am in private practice and for my part I see no evidence of any deterioration

in the general health. The children are well and well-nourished, dental caries is not on the increase, and I for one feel sure that I am seeing less gingival disease and far less accumulation of calculus on the teeth than in normal times. Besides their professional duties many dentists are doing public service as Home Guards, Air Raid Wardens, Anti-Gas Officers, First-Aid Post Officers and other duties.

You may think we are too busy to think about the future. We are busy, but not too busy to look forward with confidence first to winning the war and then to reconstruction in the peace. The confidence of our great Prime Minister only reflects the confidence of the rank and file. The dark days when we were fighting the powers of evil alone are past. Now the free men of the world are ranged on one side and those who

have never known what freedom means are on the other. We feel completely justified in our faith that if the free men are true to themselves, willing to live and fight for, and if needs be to die for all that they hold dear, there will be no doubt of the issue, however many months or years the struggle may go on. After the war we have a clear aim before us, namely that every man, woman and child in the country shall have ADEQUATE dental attention through life, and we know that the Government will do its best to see that this result is attained. Already some main outlines of a scheme are emerging, and the time may not be long before we find ourselves working out the practical details of its application.

June 2, 1942.

Signed: J. B. PARFITT,

President, British Dental Association.

DENTAL CORPS NEWS

M.D. No. 4, Headquarters Montreal, Quebec

DR. CARVER JOINS C.D.C.

Captain J. Kenneth Carver has been appointed to the Dental Corps. Capt. Carver was graduated from McGill University in 1923 and has been Dental Surgeon at St. Mary's Hospital of Montreal since 1929. In that same year he was appointed Grand Knight to the Montreal Council of the Knights of Columbus, and since 1936 has been District Deputy of the Order.

Capt. Carver was President of the Catholic Layman's Retreat Association from 1934 to 1937, and is a charter member of the Rotary Club of Westmount where he was President in 1936.

In 1938 he became a member of the Board of Governors of the College of Dental Surgeons of the Province of Quebec, and in 1939 he was appointed a member of the Executive Committee of the Canadian Dental Association.

He was named President of the Montreal Dental Club in 1940, and upon the formation of the War Services of the Knights of Columbus in that year he was named Montreal representative. He was appointed Chairman of the first campaign organized for the benefit of the troops.

M.D. No. 10, Headquarters Winnipeg, Manitoba

Two valuable appliances have been added recently to the prosthetic equipment of this District, principally through the ingenuity of Major Grahame and Sgt. Hogg. One is an electric oven with thermostatic control for processing acrylic dentures, permitting 20 or 30 to be done at once. The other is a carbon torch soldering machine, built up on a reactance coil with ten taps and will be used specially for soldering chromel clasps. It can be used with a carbon arc to generate over 4000°F. of heat. A universal joint apparatus for holding parts of clasps or bars in place was designed. This machine was designed from magazine ideas by Major Grahame and some of the parts made by him in his basement workshop. Sgt. Hogg built the coil and some other parts and it is nicely housed in a small cabinet supplied by the engineers.

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While on duty at a German prison camp in this district Capt. Ezard in attending a German prisoner found that he had done some work for this man's father who was a German prisoner in the last War, located at Ripon, England.



C.D.C. OFFICERS

The promotion of Captain Gerard Baillargeon to the rank of major has been announced. Major Baillargeon is with the No. 39 Company of the Canadian Dental Corps attached to No. 3 Training Command of the Royal Canadian Air Force at Montreal. He centres the picture with Major L. E. Kent (left) and Lt.-Col. C. B. Climo, D.C.M., E.D.

Thirty-seven years of age Major Baillargeon is the son of Omer Baillargeon, 4061 Blvd. Decarie, Montreal. He is a bachelor and doctor of dental surgery of Montreal University. Prior to joining the Canadian Dental Corps he was in charge of the dental clinic of Sacré-Coeur Hospital in Cartierville and a former secretary of the Dental Society of Montreal. He enlisted in the army at the beginning of the war and was promoted to Captain in May, 1940. In September of the same year he was attached to the R.C.A.F. and was senior officer of the dental clinic of No. 1 Wireless School, Montreal, in November, 1940. He is now in charge of dental work at No. 5 Manning Depot at Lachine, his appointment starting in March, 1940.

The Ladies' Auxiliary of the Canadian Legion at Port Arthur recently supplied the Dental Clinic at Current River Park, Port Arthur, Ontario, with beautiful curtains.

Mr. J. G. Snidal enlisted with No. 30 Company on July 1. This makes the third son of Dr. Jack Snidal to enlist in this Company.

"The best thing for you," said the doctor, "is to give up drinking and smoking, go to bed early every night, and get up early in the morning."

"Doctor," replied the patient solemnly, "I don't feel somehow that I deserve the best. What's the second best?"

NEWS FROM THE PROVINCES

ALBERTA:

Dental Education

Members of the Alberta Dental Association in general are not aware of the importance to them of the work of the staff of the Dental Department of the University of Alberta. The following figures tell the story in one short paragraph.

Since 1927 there has been a steady stream of graduates from the school, and the larger proportion have taken up practice in Alberta. At the beginning of that year every dentist practising in the province was a graduate of other schools. At the present time there are, including men in the Canadian Dental Corps, two hundred and sixty-five men on the register of the Association. Of these, ninety-six are graduates from our own school.

It is apparent therefore, that before many years have passed, the dental profession of this province will be mainly composed of Alberta graduates. The level of the profession in Alberta will be just about the level of the graduate. It is time that we took a greater and more active interest in this school which decides who will be our confrères and next door dental neighbours.

For some years the staff has struggled against the handicaps of inadequate funds from the governing body of the University, and apathy and outright opposition from the members of the Association. It is obvious to anyone who visits the University that the physical equipment of the school has been a disgrace, and a major impediment to the work of graduating capable dentists.

From considerable contact with graduates and some occasion to see the working of the school, the writer has come to the conclusion that the staff of the Dental School has, despite serious handicaps, graduated men who are a credit to the profession. To the staff members alone must go the credit of producing good results in the face of the most discouraging conditions.

Let us awake to this fact. As long as the school continues, the level of the profession in Alberta will continue to approach the level of the graduate. This makes it the essential business of every one of us to take an interest

in the school, giving the Director and his staff praise where praise is due, and otherwise only friendly and helpful criticism.

No other single factor is of equal importance in shaping the future of dentistry in Alberta.

—J. W. C.

Alberta Dental Association

At the annual meeting of the Alberta Dental Association held in Calgary, June 23, the following officers were elected for the ensuing year: President, C. D. Husband, of Red Deer; Vice-president, H. R. MacLean, of Edmonton; Secretary, R. A. Rooney, of Edmonton. Other members of the board are, H. L. Freeland, of Calgary; R. R. McIntyre, of Calgary; J. G. Miller, of Lethbridge, and W. F. Keith, of Bassano.

MANITOBA:

Mr. Fiset Moves East

Mr. W. Fiset, who for fourteen years has been city salesman for the Ash Temple Company, has been transferred to Montreal. Mr. Fiset was not only a salesman but an electrical genius and he will be greatly missed in this Province.

ONTARIO:

Prescriptions to Laboratories and Technicians

Section 20, sub-section (1. a) of the Ontario Dentistry Act, effective June 15, 1942, reads as follows:

"It shall be the duty of every member of the College to furnish to the dental technician or other person instructed by him to undertake or perform any work or service, or give any advice or assistance in clause c of sub-section 1 described, a written prescription therefore, signed by such member, and where necessary, a design, impression or cast, at the time of giving such prescription or instructions."

In order to carry out the intent of this law, and thus gain its benefits for the dental profession, the Board has passed the following rules:

1. Members of the College will be required to furnish dental laboratories or technicians with a written prescription for each piece of

work to be processed by the laboratory or technician.

2. This written prescription shall contain the following elements:

- (a) the date,
- (b) the name of the laboratory or technician to which the prescription is addressed.
- (c) a clear description of the work to be done by the laboratory or technician with appropriate diagrams, etc., where necessary.
- (d) a clear specification of the character and quality of materials to be used.
- (e) the signature of the member of the College.

In other words, the performance of any branch of dentistry, without some instructions from a member of the College in good standing, becomes a violation of the Act.

Grey, Bruce and Dufferin Counties Dental Association

The above Association held its annual meeting on June 15. The following officers were elected for 1942-43: President, Dr. D. D. Campbell, Paisley; Vice-president, Dr. George McKee, Owen Sound; Directors, Dr. J. E. Truemner, Chesley; Dr. J. A. McArthur, Markdale; Dr. McDonald, Ripley, and Dr. S. C. Sudden, Dundalk.

Dr. and Mrs. Harold Clark Bereaved in Accidental Drowning

Ralph M. Clark, son of Dr. and Mrs. Harold Clark, Toronto, lost his life in Milford Bay, Lake Muskoka, on July 13. While out in his boat during the early evening, Mr. Clark was seen to topple into the water and despite rescue efforts his body was not recovered until the following afternoon. Deceased was a bachelor, aged 38, living at home with his parents at 44 Wilcox St., Toronto. With Dr. and Mrs. Clark he had been at their summer home scarcely three weeks when the accident occurred.

Mr. Clark was graduated from the Department of Engineering, University of Toronto, in 1926 and since that time had been a member of the staff. The sympathy of a large circle of friends go to Dr. and Mrs. Clark in their bereavement.

Capt. and Mrs. E. T. Guest Bereaved

Douglas Guest, aged one and a half years, youngest son of Capt. and Mrs. Edmond Guest, was drowned on June 29. Mrs. Guest and her family of three boys had just arrived on the week-end at their family cottage at Port Severn, Ontario. The little lad had slipped out of his mother's sight only a few minutes and was found by her in the water lifeless.

Sincere sympathy is extended to Ed. and Kay Guest, as they are familiarly known, in the great sorrow that has come to them.

BRITISH COLUMBIA:

Vancouver Dental Society

A special meeting of the Vancouver Dental Society was held on June 23 to greet Dr. Fulton Risdon, of Toronto.

Dr. Risdon had just appeared before the Canadian Medical Association meeting at Jasper, B.C. It was fortunate for the Vancouver Dental Society that his plans permitted him to appear in Vancouver as consultant to the Department of Pensions and National Health, and a fine turnout greeted him; this in spite of the fact that summer recess was being observed and vacation plans were in the offing. No one was disappointed.

The Toronto graduates enjoyed very much visiting with Dr. Risdon and were proud to have graduates of other schools meet a man of his calibre and authority.

He spoke on Reconstructive Surgery (Oral and Plastic Surgery) and made particular reference to a simplified method of ligating jaw fractures. This latter should be of much help to many British Columbia dentists.

Dr. Risdon appeared before the Victoria Medical Association before returning East.

Vancouver Dental Society Elections

At the May meeting of the Vancouver Dental Society the following officers were elected for the year 1942-3.

President, Dr. G. D. Stibbs.

President-elect, Dr. E. E. Martin.

Secretary-treasurer, Dr. K. L. McWilliams.

Board of Censors, Doctors E. L. Pottinger, C. G. Kemp, J. Gansner and N. H. Scott.

EMPIRE NEWS

GREAT BRITAIN:

Health and Production

A great conference on Health and Production was held in London on May 16. It was notable because shop stewards, trade unionists, managers, doctors and health workers of every sort met together for the first time to discuss ways of combating sickness and accidents in industry and so increasing production. Dr. Garland showed that illness alone cost us more than thirty million working weeks a year; in that time nine thousand aircraft could have been built. The military critics say that one thousand fighter planes would have been sufficient to hold the Japanese in the Far East. —*Guy's Hospital Gazette*, May, 30, 1942.

Director of Dental Services in the R.A.F.

Group Captain Somerville - Woodiwis, Director of Dental Services, has been promoted to the rank of Air Commodore.

Wives as Receptionists

Many London dentists are employing their wives to replace their receptionists who have been called up for war work.—*D. Mag. & Oral Topics*, April, 1942.

SOUTH AFRICA:

A Preliminary Survey of the Oral Condition of Bantu Citrus Workers

by B. COHEN, Department of Dentistry,
University of the Witwatersrand

(Conclusions of paper in the *S. African D. Jrl.*,
May, 1942)

1. The incidence of gingivitis is not significantly lower in Bantu who receive an abundance of Vitamin C in their diet than in the Bantu races generally.

2. The intimate relationship between general oral conditions and the incidence of gingivitis in the Bantu suggests that a lack of oral hygiene partly accounts for the presence of gingival lesions; and that the factor of hygiene is of greater importance than the possibility of avitaminotic states.

3. The incidence of gingivitis is greater

among newly-recruited labourers, who have not yet received the advantage of abundant citrus fruits in their diets. Since, however, the incidence of caries in this group was also higher it cannot be maintained that the improvement of gingival health in the older workers was necessarily associated with their increased citrus intake.

A Discussion on an Examination of the Jaws and Teeth of 3,000 Natives

by CAPT. S. DAVIDOW, B.D.S. (Rand),
Johannesburg

(Condensed from the *S. African D. Journal*,
May, 1942)

This paper is based on an investigation of the mouths and teeth of 3,000 potential recruits for the Native Military Corps.

These natives are recruited from nearly all over South Africa, more particularly Northern Transvaal. The majority of these recruits are what we would commonly refer to as a "A country type." Most of them have lived in their own tribal environment and have not come in contact with civilization in large towns. The larger majority come from native reserves.

From the medical point of view the recruits are of a particularly good type. Roughly about eight per cent are rejected.

14.5% were found to have perfect jaws and teeth; 57% were placed in category A—indicating the large percentage with good teeth. Of the total, 3% were found to have inefficient masticating apparatuses.

It was found that after 3,062 recruits were examined, 1,254 extractions were advisable. This gives a reading of .2 of an extraction per man. This is another proof of the sound oral conditions of the native.

Their teeth are beautifully white in appearance and have a healthy white lustre. The greater majority of their mouths are wonderfully clean and in good condition. Tartar formation, although quite common, is not universally prevalent. The crowns of all teeth are invariably well shaped, defined and developed. The presence of an additional lower third premolar is by no means uncommon.

Very few natives indeed have their teeth filled, and yet most of them retain their own teeth till old age, a fact which shows how

more resistant their teeth and gums are to the ravages of oral disease.

The tooth which most commonly has to be extracted in natives is the lower second molar. The upper first molar is the next most prone to decay. With regard to the extractions, I think the average native's tooth takes about twice as long to extract as the average European's. Dry sockets after extraction are extremely rare. This may be due to the native's fine recuperative powers, but the real

reason seems difficult to explain. I have done hundreds of extractions in the open and under the worst conditions, and I have found very few dry sockets on subsequent re-examination. Haemorrhages after extraction are rare. Swellings subsequent to extraction are relatively few.

After examination of 6,000 natives' mouths I have not seen one case showing typical signs of a vincent's infection.

GENERAL NEWS

Boston Convention of A.D.A. Cancelled

The 84th Annual Meeting of the American Dental Association, at which an attendance of 10,000 dentists was expected, has been cancelled "for the duration." This is the first action of the kind in the history of the Association and was taken to speed war transportation.

Boston will lose \$1,000,000 which is the estimated amount which dentists leave in a city during a meeting.

More than 100 papers were to have been read, and 350 clinics were scheduled; as well as 85 health and scientific exhibits and 75 technical exhibits.

Mr. McNutt and the Doctors

The annual convention of the American Medical Association opened in Atlantic City on June 1. The Association has a membership list of 120,000 physicians and surgeons, of whom about 10,000 attended the meeting.

Paul V. McNutt appeared twice before the Convention to express the Government's dissatisfaction with what has been done thus far with regard to the distribution of medical resources. He stated that as yet neither the Government nor organized medicine had presented an adequate plan to meet the medical emergency and that if there was to be an army of 9,000,000 men the armed forces would require one third of all the physicians in the country, including those who had retired.

Mr. McNutt reminded his audience that it

was plain that doctors must not only rise to a critical occasion but that they must willingly engage in a social experiment which will clearly indicate what kind of medicine must prevail if the implications of the Social Security Act are to be carried out.—*Excerpt from New York Times.*

California Supreme Court Decision on the Ownership of Roentgen Films

by S. W. DONALDSON, M.D., Ann Arbor, Michigan

Condensed from Radiology

(*Excerpt from Dentistry, a Digest of Practice, July, 1942*)

It was the contention of the plaintiff that in failing to deliver to him, or to persons authorized by him, the films made during an x-ray examination, the defendants had failed to fulfil their contract and that he was entitled to a refund of money paid for the examination.

It was ordered by the Court that the judgment in the plaintiff's favour by the lower court be reversed because it held that in the absence of a special agreement to the contrary, a hospital furnishing x-ray service for a fee contracts only to furnish a diagnosis and a report from the findings of its roentgenologist and does not agree to sell or give possession of the x-ray films, nor does it agree to permit an examination of said films by the patient nor by any person or corporation whom he may authorize to examine them except the physician originally directing that said x-ray service be rendered.

Regulation of the Practice of Dental Hygiene by Law. A Digest of the Law of 35 States in U.S.A.

(Condensed from Fortnightly Review of the Chi. D. Soc., May 15, 1942)

The first state law permitting the issuance of licenses to practise dental hygiene was passed in 1916. Since that time 33 states, the District of Columbia, and Hawaii have passed similar legislation making a total of 35 states and territories which permit such practice. There are about 4,200 practising dental hygienists at the present time.

The laws regulating the practice of dental hygienists prohibit them from practising anywhere except under the supervision of a licensed dentist and in most states the dental hygienist law is an integral part of the dental practice act.

In addition to the limitation that hygienists may work only under the supervision of a licensed dentist, the state laws also limit the places in which they may practice. With the exception of one state, hygienists can practice only in (1) a dentist's office, (2) a public or non-profit institution.

The scope of activity which the hygienists are licensed to perform is similar. All of the states permit the hygienists to remove calcareous deposits, accretions and stains from the exposed surfaces of the teeth and directly beneath the margins of the gums. A few states permit hygienists to make mouth examinations. Two states allow them to administer general anaesthetics and one to polish to smoothness any overhanging margins of fillings or unevenness of the surfaces of the enamel for the prevention of caries. One permits them to apply solutions to check dental caries.

Arrival and Arrest of the Totalitarian Clinic

Investigators of a clinic recently brought under the fire of the local courts and of New York State authorities found not merely a \$500,000 a-year business but also hundreds of patients being treated en masse for individual ills, the most frequent treatment consisting of listening to suggestions that they were getting better. — *Medical Times, June, 1942.*

13,500 Dentists to be Called for War Service in U.S.A.

The army and navy need 13,500 dentists, a government official said today, and they must be drawn immediately from the 71,500 dentists now practising in the nation.

"The present ratio in the army of three dentists to 2,000 men will probably be changed to one to every 500 men," said Comm. C. Raymond Wells, chief dental officer, medical division of the selective service system. "Therefore, on the basis of an army of 5,000,000, it will need 10,000 dentists.

"The navy, on a basis of 1,000,000 men, will need 2,000. In addition, some 1,700 dentists will be needed for administrative posts." — *Chicago Tribune, May 14, 1942.*

Tuberculosis in Japan

There are reported to be 1,500,000 cases of tuberculosis in Japan, with only 16,000 sanatorium beds, according to the medical superintendent of New Life Sanatorium, Obuse, Mura. This compares with approximately 500,000 cases in the United States and almost 100,000 sanatorium beds.

In Japan the tuberculosis death rate in 1936 was 206.6 per 100,000 population, according to The Annual Epidemiological Report of 1937 of the League of Nations. This was the second highest tuberculosis rate among the nations of the world.

Only Chile, with 265.8 tuberculosis deaths per 100,000, had a greater mortality rate. The same report lists the rate for the United States for 1937 as 53.6 deaths per 100,000. — *Bulletin National TB Assoc., May, 1942, V.28, No. 5; per A.D.A. Release.*

Dentistry in the Soviet Union

Since 1891 two categories of workers have been distinguished; the dental surgeon, who had graduated from a dental school; and the dental technician or mechanic who served an apprenticeship. Broadly speaking, the system remains unchanged today. There is, as in this country, a four to five year's course, which must be taken either in a special dental school, known as a Stomatological Institute, or in a dental school attached to a Medical School. In Kharkov, for example, there is a

Stomatological Institute which, in 1937, had three hundred and fifteen students taking a five year course and a faculty of seventy members. A very interesting feature is the number of post-graduate medical schools which have special chairs in Stomatology. These schools offer regular post-graduate courses to doctors and dentists, on full pay. These are available every three years.

Students will be wondering about fees—the great majority receive scholarships and pay no fees and many also receive maintenance costs during their training.

Medical services in the Soviet Union are free to all citizens. Doctors and dental surgeons have a fixed working day of from four to six hours in the public dental clinics. Dental mechanics work from four to seven hours daily. There is of course, no private practice in the Union.

In the earlier days of the Soviet Union most of the dental materials and instruments had to be imported, but immediately before the war started nearly all materials were being manufactured in the country. Both manufacture and distribution are in the hands of the State. All new products are exhaustively tested in special institutes before being released for use.—*National Dental Hospital Gazette, Feb.-Mar., 1942.*

X-Ray Burns and Accident Insurance

In spite of the fact that the danger of over-exposure to roentgen rays has been emphasized in hundreds of articles and talks, several cases of severe burns have arisen in the past several years. There were undoubtedly others which went unnoticed because they did not receive the publicity which comes as the result of a suit to recover insurance for the damages suffered.

This article is not written to reiterate the warnings incident to over-exposure, but to indicate the problems which arise once an injury is sustained. If the injured person has no insurance he must expect large bills for medical care and possibly complete loss of his ability to practise, not to mention the pain and suffering usually experienced from such injuries.

If the dentist does have insurance, it is usually of the "Accident and Health" variety and when he presents his claims he is apt to

find that the company will refuse to pay. This refusal will be based on the fact that the insurance policy covers injuries caused by "accidental means" and the company will allege that an injury of this type is not "accidental" in the sense that a fall or a cut is accidental.

No amount of insurance can compensate for such injuries. These cases should serve as additional warnings to avoid unnecessary exposure.—*A.D.A. Committee on Legislation.*

Monopoly Boosts Price of Dentures

The Justice Department disclosed to the Senate Patents Committee that monopoly controls are holding up the prices of dental materials.

Walter R. Hutchinson, special assistant to the Attorney General, testified that duPont and Rohm & Haas have maintained a retail price of \$4 on the basic material for dental plates which costs duPont only 15 to 30 cents to make. He added that similar monopolies existed on other dental materials.

Hutchinson testified that through patent agreements, the two companies have maintained identical prices on the dental material—scientifically known as methyl methacrylate—and have waged unceasing war on other companies which have attempted to compete.

The two producing companies have restricted the marketing of their product to three distributing companies to maintain their price agreement. But the high price they have maintained has led to bootlegging by smaller companies.

Hutchinson emphasized the military importance of the dental material, in view of the widespread dental needs of soldiers and potential soldiers. He said the Navy rejected all bids for the material last year after receiving identical bids from the three major distributors.—*Pm, April 21, 1942; per N.Y. Jour. of D.*

Pyorrhea—A Public Health Problem

Public health has been defined as "the art and science of preventing disease, prolonging life, and promoting physical and mental efficiency through organized community effort." Inasmuch as dental caries, dental abscesses, Vincent's infection and pyorrhea lower the level of health of the individuals in a com-

munity, they are all properly characterized as public health problems. Prevention of the serious consequences of these diseases by early discovery and care is the present limit of preventive dentistry.

Pyorrhea is a more sinister disease than is generally believed. It lowers the health level, destroys the alveolar process to such an extent that it complicates the denture problem, and causes the loss of more teeth than any other factor after age thirty-five. It is a disease that receives too little attention at the hands of most dental practitioners. Somehow there has grown up the belief that nothing can be done about pyorrhea. Unfortunately, most cases are discovered in the late stages, so in many

instances nothing can be done. But pyorrhea is not a hopeless disease. It is not difficult to save the teeth involved, if only early discovery and early treatment are instituted.

The Minnesota Department of Health has recognized the public health aspects of pyorrhea and with the Center for Continuation Study, University of Minnesota, sponsored a post-graduate course on the subject on May 25, 26, and 27. This course was approved by the Dental Health Educational Committee of the Minnesota State Dental Association.

In the field of periodontia lies one of dentistry's greatest opportunities as a health service for the public.—*A.D.A. Release.*

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

Ghent Wilson, of Toronto, Ontario, aged 56, died suddenly at his home July 4.

He was graduated from the R.C.D.S. of Ontario in 1906. He attended St. Anne's Anglican Church and was a member of the choir. He also belonged to Georgina Lodge, A.F. and A.M.

Dr. Wilson is survived by his widow, two brothers and two sisters.

Andrew's Presbyterian Church and a member of the Scottish Rite. He was well known as an enthusiastic curler and bowler and took an active part with the Kingston Conservative Association, in which body he held office at various times.

Besides his wife, he is survived by three sons, Capt. Freeman Waugh, overseas; Douglas and Jack.

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Freeman A. Waugh of Kingston, Ontario, died suddenly on July 7, at his summer home in Pittsburgh. Death was attributed to a heart seizure.

Dr. Waugh was one of Kingston's most prominent citizens. He was born in Boyne, Ontario, son of Charles Waugh, who came to Canada from Scotland. He resided in Kingston for 45 years and was highly regarded among a wide circle of friends and acquaintances. He was a member of St.

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John J. Leacy of Ottawa, Ontario, aged 64, died July 12. He was graduated from the R.C.D.S. of Ontario in 1903, and in the same year established a practice in Ottawa.

He was a member of St. Theresa's Parish and belonged to the Holy Name Society of that Parish. He was a former member of the Ottawa Council of the Knights of Columbus. At one time he was President of the Ottawa Dental Society.

Dr. Leacy is survived by his widow, one son, one daughter and two grandchildren.

. . . SECTION FRANÇAISE . . .

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REDACTEUR

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516 est, rue Sherbrooke, Montréal, Québec

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La dentisterie d'Etat s'annonce pour nous

*Conséquence inéluctable des profondes erreurs
dans notre régime économique.*

par PHILIPPE HAMEL, B.S., D.D.S., Québec, P.Q.

Le prêt à intérêt

(suite)

Ce ne fut qu'au seizième siècle que divers auteurs, tous protestants, commencèrent à soutenir la légitimité de l'intérêt: entre autres, Dumoulin et Calvin. Depuis, l'idée fit des progrès tels qu'en 1910, le Révérend Père Alberic Belliot, O.F.M., écrivait ce qui suit, dans son manuel de Sociologie catholique, (page 163):

"Le Prêt à Intérêt est une institution tellement chère et tellement familière à l'humanité dégénérée, que l'Eglise a été obligée de se comporter avec elle exactement comme avec certaines coutumes et habitudes plus détestables encore mais qu'Elle ne pouvait supprimer non plus, tel l'esclavage par exemple, ou la guerre".

L'auteur parle d'humanité dégénérée. Exagère-t-il, à l'aspect qu'offre présentement le monde?

Et plus loin, le même sociologue ajoute:

"A titre provisoire et transitoire, Elle (l'Eglise) semble souvent admettre des choses que Son esprit condamne. Elle les laisse debout, faute de pouvoir les détruire".

Le Prêt à Intérêt a surtout triomphé depuis la Révolution française de 1789. Il

s'est répandu au point que l'Eglise a dû, devant la grandeur du mal, devenir plus tolérante à son endroit.

En 1792, l'Evêché de Québec avait demandé à Rome s'il était usuraire de prêter, selon la loi du pays, à un intérêt ne dépassant pas 6%. — On avait répondu à cette question, en référant l'Ordinaire à l'Encyclique de Benoît XIV, et en disant que "le Prêt à Intérêt était en opposition avec la loi divine et la loi naturelle, et qu'il n'était pas permis à un catholique de se prévaloir d'une loi civile quelconque pour le pratiquer".

Dans cette même réponse, Rome déclarait aussi que:

"Les juges qui obligent un emprunteur à payer un intérêt; les avocats qui défendent les usuriers; les notaires qui préparent des actes les favorisant, pèchent gravement parce qu'ils causent du tort à l'emprunteur et participent au crime du prêteur.

"Quant à ceux qui ont l'administration des biens des pupilles, ils ne peuvent en aucune manière en retirer un intérêt, soit pour leurs pupilles, soit pour eux-mêmes.

"Si ces prêteurs à intérêt désirent recevoir les sacrements, il faudra, avant de les y admettre, leur faire promettre d'abandonner ce commerce, en plus de restituer ce qu'ils ont acquis injustement" (14).

Par la force des circonstances, il faut l'admettre, nous avons évolué depuis lors.

Au commencement du 19 ième siècle, dans notre pays, à Québec même, Mgr. Plessis écrivait:

"La rigidité de nos principes sur le Prêt à Intérêt et sur la gestion des deniers pupillaires, dont la Cour de Rome ne nous a point voulu permettre de nous relâcher, nous met en opposition avec les premiers,—(il s'agit ici des avocats, des notaires et des membres de la Chambre d'Assemblée),—de telle sorte qu'il y a très peu d'avocats et de notaires qui fréquentent les sacrements et que plusieurs s'élèvent contre le Clergé, comme maintenant une doctrine pernicieuse et nuisible au commerce et à l'intérêt public".

Aujourd'hui, combien de fidèles échapperaient à l'excommunication, sans une plus grande tolérance de l'Eglise?

Le Pape Benoît XIV, dans Sa bulle "Vix pervenit" publiée en 1745, bulle que le Pape Grégoire XVI a approuvée le 29 juillet 1836 au nom de l'Eglise universelle dit clairement que le prêt comme tel ne donne pas droit à une rémunération⁽¹⁵⁾.

La première des décisions plus tolérantes ne fut donnée qu'en 1830 par Pie VIII, lorsqu'il écrivit à l'Evêque de Rennes pour lui apprendre qu'en matière de prêt à intérêt, les pénitents n'avaient pas à être inquiétés, pourvu qu'ils fussent prêts à se conformer en cette matière aux décisions futures du Saint-Siège⁽¹⁶⁾. C'est bien la formule d'une simple tolérance: "N'inquiétez pas les pénitents sur cette question pour l'instant".

Désormais, le Canon 1543 du Code du Droit Canonique rend licites certains prêts à intérêt, pour des raisons extrinsèques. Je ne veux pas me faire l'interprète de ces textes; laissons cette délicate tâche à des compétences.

Des auteurs ne voient là qu'une tolérance dans le but d'éviter un plus grand mal et d'empêcher que les catholiques, en présence de la généralisation du prêt à intérêt, ne soient exclus de la vie économique.

"Il est d'ailleurs inutile de faire intervenir l'Eglise dans le débat, écrit GORSE⁽¹⁷⁾. La décision de l'Eglise sera toujours ce qu'elle a été. L'Eglise est chargée de maintenir la pureté de la doctrine; il ne lui est pas permis de mutiler l'Evangile et de faire dire à Jésus-Christ le contraire de ce qu'Il a dit. Si l'Eglise tolère les expédients employés de bonne foi dans le tumulte et la tribulation des affaires pour tirer un profit modéré de l'argent, Elle n'admet pas et condamne le prêt à intérêt comme usuraire. Lui

(14) Le Canada Français, avril 1941, page 790.

(15) La Justice de St-Thomas, Tome III. Traduction française par G. Spicq. O.P. page 478.

(16) Manuel de Sociologie Catholique, Père Belliot p. 165.

(17) La Terre ou l'Argent—qui l'emportera, p. 293.

demander de modifier Sa doctrine serait peine perdue et, à mon avis, jamais doctrine n'a été plus sage et mieux justifiée que la Sienne".

(18) Selon l'Abbé Jules Morel, la tolérance du Saint-Siège se justifie par le malheur des temps et la dureté des cœurs.

Laissons la discussion sur ce point à des experts. Examinons où conduit le prêt à intérêt, au simple point de vue économique.

PROGRESSION GEOMETRIQUE — Fait indéniable, le prêt à intérêt composé conduit, par une progression géométrique, à l'absurde. Il nous donne des chiffres fantaisistes, astronomiques, si on poursuit théoriquement son application à travers les siècles. Un sou placé à intérêt composé, à 5%, au temps de Notre-Seigneur, donnerait une somme telle qu'il faudrait, aujourd'hui, pour en payer l'intérêt simple, trente-six globes terrestres en or solide par seconde.

Si un sou à intérêt composé conduit à une aussi colossale absurdité, n'essayons pas d'imaginer ce que produiraient des milliards placés dans les mêmes conditions. Un dollar placé à 5% en 1608, lors de la fondation de Québec, constituerait, en 1941, l'imposante somme de \$11,378,000. — Une piastre à intérêt composé à 4% donne, après mille ans, \$148, suivis de 168 zéros.

Evidemment, le prêt à intérêt conduit normalement, par voie directe, à des énormités insensées. Il ne saurait être recommandable dans un régime économique, puisqu'il conduit à l'absurde. Même légitimé par la loi, il reste une chose contre nature.

Avec l'intérêt à 6%, un capital se double en douze ans; se quadruple en vingt-quatre ans; augmente huit fois en trente-six ans, et ainsi de suite, pour être multiplié cinq cent douze fois en cent huit ans. Pour que la société puisse donner un rendement sur des capitaux accrus à cette rapidité, il faut nécessairement qu'elle produise dans la même proportion, et que l'industrie et le commerce accroissent leur production selon la même progression géométrique. Nous pénétrons de nouveau dans le règne de l'impossible, de l'absurde.

Sur ce continent, l'actif des compagnies d'Assurance se chiffre à quelque 28 milliards. Vu les pertes possibles, doublez ce capital seulement à tous les vingt-cinq ans, au lieu de tous les douze ans, comme cela s'opère avec l'intérêt à 6%, et vous obtenez tout de même, après un siècle, la somme colossale de 448 milliards. Un siècle de durée n'offre rien d'excessif pour des compagnies d'Assurance. Croit-on qu'il soit possible à une société de donner un rendement sur des capitaux aussi volumineux? Faites croître maintenant l'actif des banques dans la même proportion, et vous atteignez un nouvel épouvantail économique⁽¹⁹⁾, tout en demeurant bien deçà de la réalité où conduirait normalement le prêt à intérêt.

Avec l'intérêt composé, on atteint l'absurde en moins d'un siècle. Toutefois, ce qui empêche la folie du prêt à intérêt d'apparaître plus tôt, c'est qu'au cours des ans, cette forme d'usure sème des malheurs, des ruines, des faillites que les économistes attribuent toujours à d'autres causes. Ainsi se retarde l'échéance finale de ce système contre nature; parce que l'on en méconnaît les méfaits.

Le prêt à intérêt conduit les individus et la société au cataclysme économique. Il est le père, l'inventeur des faillites commerciales.

Il nous a valu la violation du repos dominical. Comme l'intérêt court durant les cinquante-deux dimanches de l'année, plusieurs ont cru préférable, pour réussir en affaire, de donner à l'industrie une activité constante durant les sept jours de la semaine, afin qu'elle fonctionne au même rythme que celui de l'intérêt.

En plus, le prêt à intérêt nous a donné, pour la même raison, le travail continu, jour et nuit. Une entreprise en construction verse, avant même d'être productive, des

(18) Des causes théologiques du socialisme, par l'Abbé Jules Morel (1873) page 205.

(19) Seulement au Canada, le montant global des assurances se chiffre à \$7,700,000,000. Voir Enquête du Comité Permanent de la Chambre des Communes sur la Banque et le Commerce, 1939, p. 822.

intérêts sur ses obligations. Elle se mange elle-même avant de donner des profits. Pour éviter sa destruction précoce, les administrateurs hâtent sa construction en tenant des ouvriers au travail vingt-quatre heures par jour. L'entreprise terminée, comme l'intérêt s'additionne toujours, la nuit comme le jour, pour mieux rencontrer ces exigences impitoyables du capital, elle fonctionne à deux ou trois équipes, jour et nuit.

On travail jour et nuit pour arriver plus tôt au chômage, à la fainéantise. En voulant satisfaire aux réclamations de l'argent, l'homme a couru à sa déchéance et a préparé les tueries présentes.

Il est heureux pour nous que Dieu ait limité Lui-même la durée des jours. Le prêt à intérêt aurait peut-être allongé les jours d'un autre vingt-quatre heures ou les aurait raccourcis de douze heures, selon que les capitalistes auraient vu plus d'avantages à les voir longs ou courts.

L'argent ne fait pas de petits, disait Aristote, et cependant le prêt à intérêt exige que la monnaie se reproduise elle-même comme si elle appartenait au règne animal ou végétal. Une piastre ne donne pas naissance à .25c ou à .50c dans le cours d'une année ou d'un siècle. Une piastre reste une piastre, même si vous l'accouplez à un voleur. Cependant, le cent piastres émis par une banque doit lui être retourné, après douze mois, grossi, selon le taux d'intérêt, de cinq, six ou sept unités qu'il ne peut avoir engendrées. L'intérêt est un fruit artificiel, imaginaire, avec, cependant, les exigences d'un être perpétuel, éminemment reproducteur.

Nous l'avons vu, le banquier retire en intérêts, en seize ou douze ans, selon le taux d'intérêt, une somme égale au capital prêté, et il peut, en plus, encaisser le capital encore dû, en vendant, à sacrifice au besoin, les valeurs que les emprunteurs lui ont passées comme gage des prêts consentis. C'est la spoliation inévitable de l'emprunteur par le "superlord" de la société contemporaine: le banquier.

Etes-vous étonné qu'un jour, Saint-Ambroise eût dit:

"Qu'est-ce que prêter à intérêt, sinon tuer un homme?" (20)

"Retrançons donc les enfantements monstrueux de l'or et de l'argent; étouffons cette exécration fécondité" (21).

Que Saint-Jean-Chrysostome eût donné cette directive sévère:

Un régime aussi extravagant que le prêt à intérêt généralisé peut durer un demi-siècle ou un siècle, mais inévitablement son effondrement doit arriver. Nous y sommes. Préparons-nous à en ramasser les débris financiers.

L'ARGENT NE SE VEND PAS—La cupidité des hommes a fait une marchandise de l'argent qui n'aurait dû être qu'un moyen d'échange, une mesure des valeurs. L'argent ne se vend pas, il n'est pas une marchandise. On dit bien que l'on achète du change étranger. En réalité, on opère un échange de monnaie. Le collectionneur, le numismate, par exception, achètera réellement une vieille pièce de monnaie. Il achète la valeur que donne l'ancienneté à un objet. Il n'achète pas la valeur intrinsèque de la monnaie, mais ce que lui confère sa vieillesse. On peut fort bien échanger une piastre pour une autre piastre, mais qui oserait dire que c'est là un achat? D'ailleurs, quel avantage y trouverait-on? Il est possible d'échanger un dollar pour un objet d'une valeur d'un dollar. Dans ce dernier cas, il s'agit alors d'une vente. Ce n'est pas la piastre que l'on achète mais l'objet. L'argent, dans ce cas, sert ses deux fins propres: il devient moyen d'échange et mesure des valeurs. Tandis que prêté à intérêt, il devient un instrument d'usure; il cesse d'être un auxiliaire de la production; il devient lui-même producteur, ou encore il est traité comme une marchandise alors qu'il est invendable.

(20) Somme théologique de Saint-Thomas, G. SPICQ, Livre III, Sur la Justice, p. 451.

(21) La question économique du Prêt à Intérêt, J. MOREL, p. 24.

L'ARGENT NE SE LOUE PAS—L'objet que vous louez ne cesse pas d'être votre propriété. Le locataire n'a le droit qu'à l'usufruit de la chose louée. A l'expiration du bail, il doit la remettre à son propriétaire telle que reçue de lui. On ne peut donc louer qu'un objet dont l'usufruit est distinct du droit de propriété. Comme il faut être propriétaire de l'argent dont on veut faire usage et que, dès qu'on en fait usage, on cesse d'en être propriétaire, il devient évident que l'argent ne peut se louer, parce que son usage et sa possession sont inséparables.

L'argent que vous prêtez n'est plus à vous. L'emprunteur en devient le propriétaire. Il peut en disposer à son gré, le détruire, le perdre ou se le faire voler, sans pour cela être libéré de l'obligation de vous restituer l'équivalent de ce qu'il a reçu. Il doit vous remettre non le même argent que celui que vous lui avez prêté mais seulement l'équivalent de cet argent. Par conséquent, l'argent est une chose fongible, comme le pain par exemple. On ne peut louer du pain. Si quelqu'un prête du pain, il n'a le droit d'exiger que la même quantité et qualité de pain, en retour. Tout ce qu'il requerrait en plus deviendrait de l'usure.

L'argent se consomme par l'usage. Celui qui l'emprunte, ne le garde pas. Il l'emploie immédiatement pour acquitter des dettes ou faire des achats.

Employer l'argent, c'est le céder à d'autres. Or, ce qu'on loue ne peut être cédé à personne; ce reste la propriété du bailleur.

Puisque l'argent ne se vend ni ne se loue, l'intérêt ne saurait être un prix d'achat ou un prix de louage. Il faut chercher d'autres prétextes pour essayer de justifier l'intérêt qui, mathématiquement, conduit à des fantaisies déraisonnables.

On peut lire dans la Somme de Saint-Thomas⁽²²⁾:

"La loi humaine tolère le prêt à intérêt, non point qu'elle l'estime conforme à la justice, mais pour ne pas nuire au plus grand nombre. Aussi le droit civil lui-même prescrit-il: 'les choses qui se consomment par l'usage, ne sont pas susceptibles d'usufruit, ni selon le droit naturel, ni selon le droit civil'."

Pour BOHM-BAWERK, l'intérêt c'est le prix du temps, et cette simple idée révolutionne presque toutes les recherches antérieures⁽²³⁾, selon Henry Hornbostel.

Vieil argument qui ne révolutionne pourtant rien et que Saint-Thomas d'Aquin a bel et bien réfuté⁽²⁴⁾:

"Or, le temps est un bien commun, ce n'est la propriété de personne, et Dieu le donne également à tout le monde. C'est pourquoi l'usurier de ce genre, qui prétend évaluer et compenser la chose reçue avec une chose qui n'est pas sienne, qui appartient également à celui qui reçoit et à celui qui donne, et que Dieu donne gratuitement à tout le monde, commet une fraude, et à l'égard du prochain à qui appartient le temps qu'il lui vend, et à l'égard de Dieu dont il met à prix un don gratuit".

Ni prix d'achat, ni prix de louage, l'intérêt ne saurait être le prix du temps, d'après l'ange de l'Ecole. Il reste pour la justification du prêt à intérêt, les raisons extrinsèques: *Lucrum cessans*, *periculum sortis*, *dammun emergens*.

Laissons ces arguments aux experts. Il serait d'ailleurs difficile de les étudier dans ce travail nécessairement limité.

Comme nous sommes loin tout de même, aujourd'hui, de la volonté exprimée de tout temps par la source idéale de Sagesse: l'Eglise!

Louis XIV eut l'idée de fonder la Banque de France et consulta, au préalable, la Sorbonne à ce sujet. Et voici ce que cette dernière répondit:⁽²⁵⁾

"On examina, en présence d'un député de monsieur Colbert, si l'intérêt de prêt

(22) La Justice de Saint-Thomas d'Aquin, Tome III, p. 215, Edition C. Spicq.

(23) Drame monétaire, Henry Hornbostel, p. 240.

(24) Opuscule LXXII sur l'usure, Chap. IV de Saint-Thomas. Traduction Vedrine, Baudel, Fournet. Tome septième, p. 584.

(25) La question économique du Prêt à Intérêt, J. MOREL, p. 28.

sur simple billet, dans le cours ordinaire du commerce, peut être permis ou si c'était de l'usure.

"Tous, sans excepter un seul, répondirent que le prêt sur simple billet, même en faveur du commerce, était usuraire et que le Roi ne pouvait le permettre, et que s'il l'autorisait par une déclaration, les pasteurs et les prédicateurs seraient obligés de prêcher contre, et les confesseurs de défendre à leurs pénitents de s'y conformer autant que l'intérêt provenant du pur prêt est contre la loi naturelle et défendu par la loi divine auxquelles le Roi ne peut déroger, sous quelque prétexte que ce soit".

La Banque de France fut fondée le 13 février 1800. Louis XIV mourut en 1715. La réponse de la Sorbonné retarda donc près d'un siècle la fondation de cette banque.

Bossuet lui-même approuva la Sorbonné⁽²⁶⁾:

"Le dessein de Dieu expliqué par la tradition, n'a pas été de défendre des mots, des tours d'esprit, des vaines susceptibilités, mais le fond des choses. Je définis l'usure selon cette règle:

"Tout argent ou équivalent qui provient en vertu du prêt, et j'appelle 'VENIR EN VERTU DU PRET', ce qui dépend d'une condition qui en est inséparable et produit les mêmes effets".

L. GORSE, dans son étude "*LA TERRE OU L'ARGENT . . . QUI L'EMPORTE?*" (première partie écrite en 1865, p. 115) résume ainsi sa pensée:

"Je l'ai dit, et je crois l'avoir prouvé dès le début de ce travail, et l'avoir prouvé de la façon la plus scientifique, par des chiffres: les chiffres ne raisonnent pas, dit-on, ce qui veut dire, ne discutent pas, mais ils ne cèdent pas non plus; leur raison, c'est l'évidence, l'absolu autant qu'il est dans la science humaine; par les chiffres donc j'ai prouvé que l'usure, et l'usure même la plus modérée, est incompatible avec la vie, la durée des peuples et l'ordre voulu de Dieu; qu'elle est incompatible surtout avec la société chrétienne qui ne doit pas périr, et qui ne peut user le temps qu'en se préservant de cette rouille de l'usure, qui, se superposant couche par couche, finit par corroder le corps social le plus robuste, et le précipiter dans les convulsions de la mort violente, comme elle a fait de tous les peuples païens".

Les événements, depuis un quart de siècle, ne corroborent-ils pas les affirmations de M. Gorse et de combien d'autres?

Les abominations du prêt à intérêt ont été dénoncées non seulement depuis le nouveau testament mais même au temps du paganisme.

Ecoutez Aristote⁽²⁷⁾ parlant de l'industrie factice:

"Une des branches de cette espèce d'industrie mérite surtout l'exécration générale: c'est le trafic d'argent qui tire profit de la monnaie, et altère ainsi sa véritable destination. Le signe monétaire a été inventé pour faciliter les échanges; l'usure le rend productif par lui-même, et c'est de là qu'elle a tiré son nom; car, de même qu'un être engendre son semblable, de même l'usure est monnaie qui engendre monnaie. On a eu raison de regarder cette espèce d'industrie comme la plus contraire à la nature".

La sagesse d'Aristote, comme celle de Saint-Thomas, est aujourd'hui démodée. Aussi assistons-nous à un nouveau règne du veau d'or, avec conséquence: barbarie plus scientifique et exploitation incommensurable des masses.

De nos jours, la plus grande source de richesses ne provient-elle pas de capitaux prêtés à intérêt, sans travail et sans risque? Pourtant Léon XIII ne dit-il pas dans "*RERUM NOVARUM*":

"On peut affirmer, sans crainte de se tromper, que le travail est la source unique d'où procède la richesse des nations."

(26) Traité sur l'Usure—Bossuet.

(27) La politique d'Aristote, traduction de Champagne (1843) Livre I, Chapitre VII, p. 30.

Voyez l'appauvrissement général de l'univers en proie à l'usure pour le profit temporaire d'un petit nombre.

CONTRATS D'ASSOCIATION—Mais alors objectera-t-on, avec cette conception sur le prêt, l'argent ne rapporterait jamais de profits. Pas le moins du monde.

Tout individu qui place du capital dans une entreprise, a droit à une rémunération, s'il assume les risques inhérents à ladite entreprise. Il a droit au partage des profits, s'il s'en trouve, une fois le travailleur justement rémunéré. En justice, il ne peut entamer le capital même, pour se donner un rendement, comme cela se pratique couramment, aujourd'hui, en faveur des obligataires d'une entreprise en voie de construction.

Le capitaliste co-associé avec les travailleurs, court des risques. Son capital matériel s'use, se détériore, se démode. Il est juste qu'il touche une part des profits. En est-il de même de l'obligataire dans une entreprise où les actionnaires ont réellement fait une mise de fonds importante, correspondant aux titres qu'on leur a remis? Quand l'obligataire n'a avancé que 50% ou 60% des fonds nécessaires à une entreprise honnêtement capitalisée, court-il grand risque de perdre son capital et, s'il prend des revenus alors que l'entreprise est à se construire ou fonctionne à perte, ne pratique-t-il pas l'usure?

L'obligation n'est-elle pas semblable au triple contrat condamné par une bulle dogmatique adressée à l'Eglise universelle par le Pape Sixte-Quint? L'obligataire exige un revenu, quels que soient les déficits de l'entreprise. S'il ne touche pas ses intérêts, il peut, d'après l'acte de fiducie, s'emparer de meubles et immeubles qui gageaient sa mise de fonds.

D'après Sixte-Quint, le triple contrat existe lorsqu'un capitaliste donne son argent à un négociant par un contrat de société, à la condition que le négociant garantisse l'intégrité du capital et un intérêt fixe au bailleur de fonds, quels que soient les résultats et les vicissitudes du commerce. Ce triple contrat est déclaré usuraire par ce Pape et sujet aux peines portées contre les usuriers par les Conciles généraux⁽²⁸⁾. En quoi le triple contrat diffère-t-il du contrat de l'obligataire? Je pose la question et laisse à des compétences le soin d'y répondre.

LA SOCIÉTÉ PÉRIT SOUS LE MAL DE L'USURE—Ne vivons-nous pas tous inconsciemment dans une atmosphère d'usure? N'en sommes-nous pas imprégnés? — "Le peuple est devenu la proie des rentiers, forme moderne de l'esclavage, dit le Rév. Père Belliot".⁽²⁹⁾

A d'autres plus compétents d'établir nos responsabilités morales. Je m'efforce simplement de constater des faits, d'étudier notre régime économique à la lueur des enseignements de l'Eglise, tels que j'ai cru les comprendre. L'Eglise fut la seule, à travers les siècles, à s'efforcer de mettre obstacle au prêt à intérêt qui devait, dans le monde moderne, faire de l'argent "le maître de l'humanité" pour nous conduire aux catastrophes présentes.

Nous sommes tellement imbus de la légitimité du prêt à intérêt que même ceux qui auraient à s'en plaindre, n'ont rien à lui reprocher.

Le Code Social de Malines déclare que rien n'est plus actuel que l'usure⁽³⁰⁾, et Léon XIII (Encyclique "Rerum Novarum") a mis en relief l'habileté de l'usure à changer de forme.

Le prêt à intérêt mine l'économie, étouffe l'initiative privée, centralise la richesse de plus en plus, dépouille de ses épargnes toute la classe moyenne et contraindra fatalement le monde à la répudiation universelle des dettes.

L'usure pratiquée par les particuliers amène inévitablement les Etats à la pratiquer,

(28) La question économique du Prêt à Intérêt—l'Abbé Morel, p. 97.

(29) Manuel de Sociologie catholique, Belliot, p. 171.

(30) Code Social de Malines, p. 107.

à leur tour, en les contraignant d'affaiblir arbitrairement les titres des monnaies, ou de faire de l'inflation monétaire.

Le capital argent, dans une société sainement organisée, ne devrait jouer que le rôle d'auxiliaire dans la production. Partout où on lui donne celui de producteur, il remplit une tâche contre nature. Partout où Dieu a voulu la reproduction, Il a vu à en assurer l'équilibre en limitant la durée des êtres et des biens. L'homme, en décidant que l'argent—stérile par lui-même—se reproduirait, lui a donné un rôle contre nature. La reproduction artificielle de l'argent s'accumule sans cesse et devient monstrueuse. L'argent jouit d'une puissance de reproduction que ne possède aucune espèce dans la création. Si les biens ou les êtres de la terre ne disparaissaient pas par la consommation, la mort ou la détérioration, le point de sursaturation serait rapidement atteint, le désordre règnerait partout.

L'homme, dans sa cupidité, a voulu des revenus de tout repos qui se multiplieraient indéfiniment, sans jamais disparaître. En voulant faire mieux que le Créateur, l'homme a préparé le recul de la civilisation et ramené sur terre le règne de la barbarie.

INTERETS—DIVIDENDES—Le premier capital à rémunérer justement n'est-ce pas le capital humain? Cependant, l'économie moderne veut que l'argent soit le premier servi. Aujourd'hui, on rétribue insuffisamment l'ouvrier pour gaver le possesseur de capitaux. On verse, à ce dernier, des intérêts, même s'il n'accepte aucune responsabilité dans la gestion d'une entreprise, et même si cette entreprise est déficitaire. On lui paie des dividendes sur des capitaux mouillés, fictifs; véritables vols légalisés qui permettent la dissimulation de profits usuraires, privent l'ouvrier d'un juste salaire et frustrent le consommateur. *On l'autorise à multiplier ses capitaux jusqu'à quarante-cinq fois*⁽³¹⁾ et à se faire rembourser quatre fois sa mise de fonds, pour mieux cacher des profits exorbitants. Ainsi, paie-t-on des profits à des gens qui n'ont pas même un centin de capital investi dans une entreprise. On prétend ensuite que les revenus nets ne justifient pas une augmentation de salaires pour l'ouvrier.

Le capitaliste ne va-t-il pas, en certains cas, jusqu'à inscrire dans les frais généraux de ses industries, l'intérêt et les dividendes payés sur les capitaux? Pour extraordinaire que cela vous paraisse, ce fut tout de même le moyen employé par l'American Telephone & Telegraph Co. (compagnie-mère de la Bell Telephone Co. of Canada), pour dissimuler ses profits. Cette compagnie, monopole détestable, incluait dans ses frais d'opération, les dividendes payés sur ses propres actions.⁽³²⁾

Qu'un petit commerçant recoure à semblable procédé en vue de tromper ses banquiers, et il sera mis en prison. Les compagnies millionnaires ne sont jamais accusées de vol; elles ont à leur service des avocats experts, parfois même des professeurs d'université capables de légaliser les pires escroqueries.

AMORTISSEMENT—Les frais d'amortissement de tout capital engagé dans une entreprise sont payés par le consommateur, puisqu'il en est tenu compte dans le prix de la marchandise. Le consommateur éteint donc la dette hypothécaire des industries, sans jamais pour cela devenir propriétaire de ce que, en réalité, il achète. C'est une des graves injustices du régime capitaliste, surtout quand il s'agit de l'exploitation des ressources naturelles par des monopoles. Le capitaliste confisque le bien d'autrui à son profit: une partie du salaire de l'ouvrier pour entretenir sa machinerie ou ses immeubles; une partie de l'argent du consommateur pour payer une dette qui lui laissera sa propriété claire de toute hypothèque. Régime inique imposé aux populations

(31) Capitalisation de la Royal Electric Co., filiale de la Montreal Light, Heat & Power Consolidated.

(32) Investigation of Concentration of Economic Power, Monograph no. 21, p. 86, American Telephone & Telegraph, par Horace Coon, p. 192.

par nos supercapitalistes aveugles, dépourvus de tout sens social, de tout esprit de justice.

C'était en vue de réparer cette flagrante injustice, du moins dans un des trusts les plus néfastes, que j'ai suggéré, en 1934—dans le Programme de Restauration Sociale, publié par l'Ecole Sociale Populaire⁽³³⁾—de contraindre les entreprises hydroélectriques de créer entre les mains de l'Etat, par le versement annuel d'une redevance prise sur des revenus, une réserve avec laquelle le gouvernement pourrait racheter ces mêmes entreprises d'après la valeur matérielle de leur actif.

Puisque le public paie l'amortissement d'une dette, serait-il injuste qu'il devint le véritable propriétaire de l'entreprise ou de l'objet ainsi acheté?

Le supercapitaliste moderne ne l'entend pas ainsi. . . Sa conception du droit de propriété ressemble plutôt à la négation de ce droit, pour s'avantager lui-même. Il exige du public, en s'appuyant sur sa puissance financière, les sommes nécessaires au paiement: 1°. d'émoluments et de jetons de présence scandaleux aux officiers supérieurs; 2°. de taux d'intérêts injustement élevés sur des prêts consentis à des filiales en vue d'augmenter frauduleusement le coût de production; 3°. de dépréciation et d'amortissements disproportionnés; 4°. de droits régaliens excessifs sur des milliers de brevets. Le mauvais riche arrive à ces fins par le monopole qui lui permet la vente de nécessités de la vie moderne à des prix usuraires.

Le supercapitalisme est un monstre économique comparable en plus d'un point au communisme. Il fait du gouvernement des pays, sa créature; corrompt tout par l'argent; recourt au chantage, à l'intimidation pour atteindre ses fins. Il attaque la réputation des adversaires; au besoin, les ruine moralement ou financièrement. Il fausse l'opinion publique par la presse qu'il dirige à coups de millions; par le cinéma qu'il contrôle; par la radiophonie qui sert surtout ses intérêts. (Informez-vous du coût des services radiophoniques et demandez-vous si d'autres que les puissamment riches peuvent en faire un usage courant).

Le supercapitalisme issu du libéralisme, tend à placer toute la richesse de la nation en quelques mains privilégiées; les communisme, fruit de l'appauvrissement des masses par le supercapitalisme, veut toute la richesse dans les mains de quelques gouvernants.

Les Droits Douaniers

D'ordinaire, le supercapitaliste obtient la protection douanière nécessaire à ses monopoles.

Se trouve-t-il un gouvernement assez sage et juste pour refuser la protection de l'Etat à son commerce qui respire le brigandage, le supercapitaliste contracte alors des ententes internationales avec les grands producteurs des autres pays. Il convient avec eux de ne pas les concurrencer sur leur territoire respectif, à condition qu'ils respectent le domaine qu'il s'est choisi lui-même pour tondre une partie des habitants du globe terrestre.

Au diable, l'intervention des gouvernements. Ils n'y peuvent rien. Le chevalier d'industrie échappe à toute contrainte, à toute restriction, douanière ou autre.

Les Brevets D'Invention

Le ploutocrate moderne se moque même des lois contre les monopoles, en se servant de brevets qui confèrent des droits exclusifs pour la fabrication de certains produits.

C'est encore au moyen de la concentration des brevets que l'industrie contemporaine

(33) Programme de Restauration Sociale, E.S.P., p. 47.

étouffe l'initiative des autres, détruit toute concurrence, sème la misère, la pauvreté, crée le chômage.

Le brevet est présumé être une protection accordée par l'Etat à l'inventeur. On voulait, en cédant des privilèges aux auteurs ou inventeurs, stimuler, récompenser le talent, l'ingéniosité, en vue de développer le goût des recherches, la culture scientifique dans tous les domaines. Le brevet n'atteint plus son but. Il ne récompense plus l'inventeur et cesse d'être un avantage pour la société. On l'utilise désormais pour centraliser la richesse et la technique. Les brevets sont devenus une calamité, une menace pour l'ordre.

L'inventeur ne jouit plus des privilèges que voulait lui concéder l'Etat. Est-il le simple salarié d'une entreprise gigantesque, son invention lui échappe du coup. Il fait partie du bureau de recherches, il est rémunéré par l'industrie et ne peut réclamer comme sa propriété, ce qu'il a découvert dans le laboratoire des monopoleurs. Par contre, l'inventeur est-il indépendant de toute entreprise, invente-t-il hors de ces grands laboratoires d'épreuves expérimentales, à tout coup, il se voit frustré de son droit d'auteur par les monopoles. On lui conteste son invention; on l'accuse de l'avoir volé à une puissante organisation ou d'avoir copié une découverte déjà brevetée. D'où série interminable et ruineuse de procès pour amener l'inventeur à capituler, faute de ressources financières.

Le lutte contre les géants de l'industrie demande des fortunes pour que des individus indépendants puissent résister à leurs incessantes procédures légales aussi canailles que déprimantes et ruineuses.

LA LONGEVITE DES BREVETS—Un brevet ne confère l'exclusivité que pour dix-sept ou vingt ans. Les compagnies prolongent cette période en retardant l'enregistrement final du brevet. C'est pour cette raison que vous voyez souvent inscrit sur un objet: "patent pending". Par cette procédure, on augmente de plusieurs années l'exclusivité que confère le brevet.

Une fois la patente expirée, le monopole brevète le même objet amélioré, ce qui rend l'ancien désuet, quasi inutilisable pour les autres, et la même entreprise garde ainsi indéfiniment le marché fermé à tout concurrent.

Les Rois Du Commerce

UNITED SHOE MACHINERY Co.—Les monopoles détiennent des brevets par milliers. La "United Shoe Machinery Co.", pour nommer seulement quelques-unes de ces entreprises, possède quelque 6,000 brevets⁽³⁴⁾. Cette compagnie se protège avec ses droits de brevets contre toute accusation de restreindre le commerce et d'exercer un monopole. Quelle comédie deviennent les lois contre les trusts, en présence de tous ces brevets accumulés en quelques mains!

La "United Shoe Machinery Co." a pris plus de cent actions simultanément contre des compétiteurs⁽³⁵⁾, et bien qu'elle ne pût gagner plus de vingt-cinq de ces actions, elle contraignit, néanmoins, les autres à abandonner la lutte. Ils sont tous venus à bout de finance et incapables de tenir le coup contre les assauts répétés de cette puissante organisation. C'est la loi de la jungle.

C'est par de semblables procédés que la "Eastman Kodak Co." établissait elle aussi son monopole⁽³⁶⁾.

LA "GENERAL ELECTRIC Co."—La "General Electric" détient tous les brevets sur ce continent pour la fabrication des ampoules électriques. Quand son brevet principal fut échu, elle fit une entente avec les propriétaires de la machine "Corning" qui peut produire huit cent mille ampoules par jour. Bien que par l'expiration du brevet, il

(34) Investigation of Concentration of Economic Power, Monograph 31, p. 46

(35) Investigation of Concentration of Economic Power, Monograph 31, p. 47.

(36) Ibid. p. 47.

y eut alors liberté pour tous de fabriquer des ampoules, aucun industriel ne pouvait songer à produire cette marchandise, alors qu'un nouveau procédé de fabrication venait d'être breveté et rendait l'ancienne manière de production trop lente et, partant, trop dispendieuse.

Quand la patente sur la production à huit cent mille ampoules par jour, par une seule machine, commença à prendre de l'âge, la Cie "General Electric" breveta l'ampoule avec verre dépoli à l'intérieur. On a convaincu le public de sa supériorité, et la "General Electric" demeura la seule à pouvoir produire cette nouvelle ampoule.

La "Westinghouse Electric" a bien obtenu le privilège de vendre des ampoules, mais ses ventes ne peuvent dépasser 25,4% du total des ventes de la "General Electric" et de la "Westinghouse Electric" réunies. Quelle mise en tutelle! Quelle limitation du commerce! Pour vous, semblable acte serait une offense criminelle. Pour eux, barricadés derrière un amoncellement de brevets de toutes sortes, c'est de la légalité.

Le droit régalien que doit verser la "Westinghouse Electric" à la "General Electric", est de 1%. Advenant que la "Westinghouse" dépasserait le pourcentage des ventes qui lui est assigné, le droit régalien monterait alors à 30% (37).

Les monopoles sont rois. Ils ont leurs lois, leurs sanctions, leurs domaines, leurs esclaves.

Pour dissimuler le côté révoltant de ce commerce, des compagnies indépendantes ont réussi à obtenir le droit de fabriquer des ampoules, mais elles paient un droit régalien de 3½% et leurs ventes sont restreintes à un faible pourcentage de ce que le marché peut absorber. Si cette limite est dépassée de 5%, la pénalité monte à 20% (38).

Le pays vous permettrait d'importer des ampoules, moyennant le paiement de droits douaniers. Vous pourriez encore les vendre à meilleur compte que les ampoules de la "General Electric", mais n'allez pas commettre pareille erreur, si vous ne voulez pas accumuler sur votre tête une avalanche de poursuites. La "General Electric" s'appuiera sur ses brevets. Gare à vous, s'il vous prend de résister aux volontés de ce monopole! On vous ruinera en procès.

Aujourd'hui, la lampe fluorescente pourrait reléguer la lampe Mazda de la "General Electric" au musée. Seulement, le malheur veut que les patentes pour la lampe fluorescente soient encore la propriété de la "General Electric".

Est-il de l'intérêt général qu'on restreigne ainsi le commerce et que l'on paralyse de la sorte de nouvelles initiatives?

Les Brevets et la Guerre

Les inconvénients des privilèges excessifs que confèrent les brevets apparaissent d'une façon plus frappante lorsqu'il s'agit des besoins de l'industrie de guerre.

LE CARBURE DE TUNGSTEN (39)—Découvert en Allemagne, en 1925, ce métal est breveté par la maison Krupp. L'Allemagne l'exporte à raison de \$48.00 la livre.

Ce métal, plus dur que le diamant, coupe les plaques d'acier, permet aux balles de traverser les parois des chars d'assaut blindés.

En 1928, la Cie "General Electric" entre en scène. Elle échange des brevets avec la maison KRUPP, en vue d'obtenir l'exclusivité du marché d'Amérique pour la vente du carbure de Tungsten.

La "General Electric" fixera le prix de ce métal à son gré, mais devra payer un droit régalien de \$5.00 par livre à la maison KRUPP. Le tiers de ce droit régalien servira pour acquitter les frais des procès que pourrait entraîner la défense des patentes.

(37) Investigation of Concentration of Economic Power, Monograph 31, p. 99.

(38) Ibid. p. 100.

(39) Final Report & Recommendations of the Temporary National Economic Committee, 1941, p. 208.

Une fois seule sur le marché d'Amérique, la "General Electric" monta le prix du carbure de Tungsten à \$453.00 la livre. C'est scandaleux, abusif, anti-social et fort nuisible aux armements. Les coupables de cette hausse mériteraient de sévères châtiments. Ce prix excessif empêcha l'utilisation, sur une haute échelle, de ce métal dans les industries de guerre, alors que tout l'armement de l'Allemagne s'appuyait sur l'emploi de ce matériel d'une dureté insurpassable.

Aujourd'hui, en période d'urgence, il nous faut du carbure de Tungsten en abondance. Sa production demeurée restreinte par l'exorbitance de son prix, ne peut suffire à la demande. Il faut improviser des moyens rapides de l'augmenter. Nouveaux laboratoires, nouvelles mains expertes, chimistes et le reste. Tout cela s'accomplit au prix d'énormes difficultés. Seuls des mois et des années permettent de rattraper tout ce temps perdu à cause de la cupidité d'un monopole détenteur d'un brevet.

Nous avons voulu favoriser les inventeurs, mais nous leur avons nui tout comme à la collectivité, et cela au coût de milliers de vies sacrifiées sur les champs de bataille, en raison de l'inefficacité de nos armes.

Les monopoles, retranchés derrière leurs privilèges, aveuglés par leur âpreté au gain, nous ont donc privés, au début, d'armements aussi puissants et aussi résistants que ceux de l'ennemi.

Les leaders d'après-guerre limiteront-ils enfin ces privilèges accordés aux inventeurs? Dans l'ordre nouveau tant promis, le bien de la collectivité primera-t-il cette soif insatiable d'argent chez les monopoleurs?

(Fin au prochain numéro)

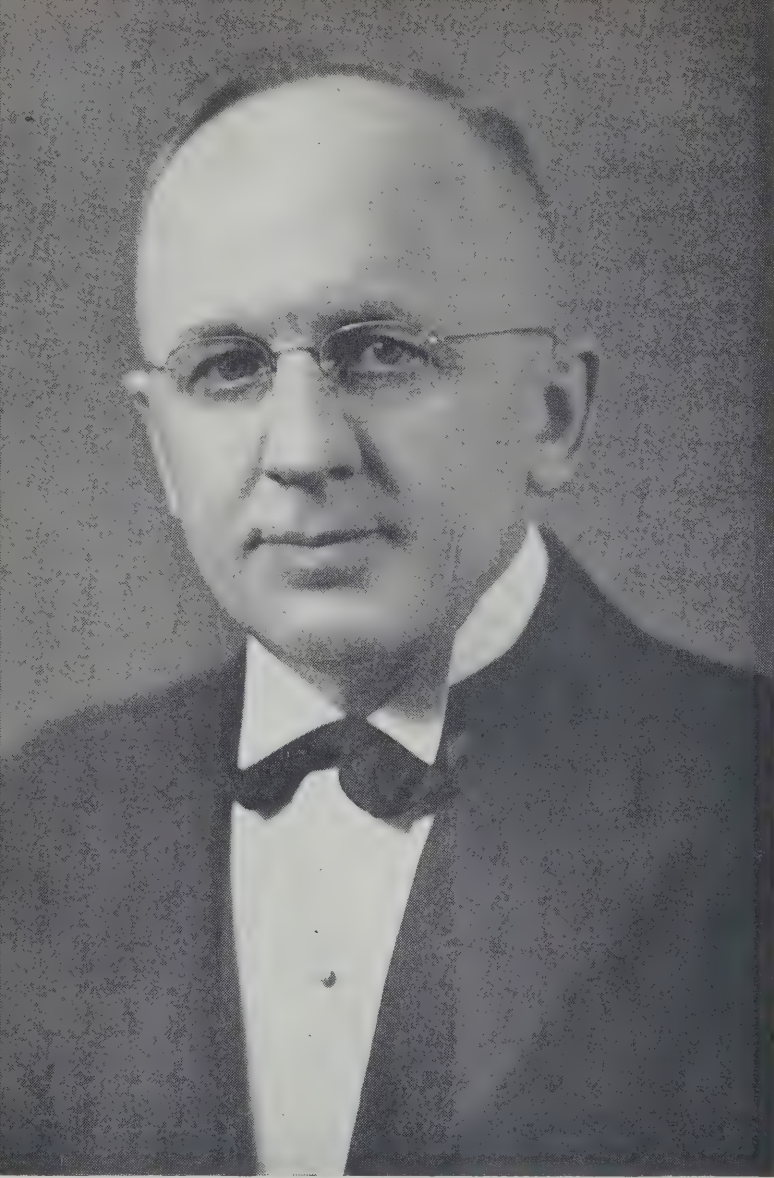


Photo courtesy Vancouver Tourist Association.

Cheakamus Canyon, British Columbia. Here the river tumbles through a riotous gorge of solid rock, while the railway line hugs the towering embankments, making one of the most wildly scenic trips in the entire west.

"It is much more profitable and less dangerous to criticize oneself before assuming the responsibility of making over someone else.

Any fool can criticize, condemn, and complain—and most fools do. But it takes character and self-control to be understanding, forgiving and useful to others."—*North-West Dentistry.*



W. SCOTT HAMILTON, D.D.S., Edmonton, Alberta.

Director of Dental School, University of Alberta.

Graduated from R.C.D.S. of Ontario, 1923.

Dental Surgeon to University of Alberta Hospital since 1923.

Past President and Past District Governor of Kinsmen Club.

On University Staff since 1924, teaching Local Anaesthesia and
Oral Surgery.

Served in France with the 13th Battery Canadian Field Artillery
in the last World War.

The Formation of Subgingival Calculus*

by HAROLD K. BOX, D.D.S., Ph.D., Toronto, Ontario

A. DENTAL CALCULUS.

IN 1886, dental calculus according to the conception of Black¹ was differentiated into two forms, salivary and serumal. This distinction related to the source and position of the deposit. More recently, the term 'salivary calculus' has been employed by a number of writers to comprise all deposits of calcified material that are laid down on the surfaces of the teeth and dental restorations in the mouth. This would indicate a conviction that there is no such substance as serumal calculus. Indeed Prinz² has gone so far as to state that "saliva is solely responsible for the constituents of tartar."

From a clinical standpoint based on differences of location of deposition and physical properties, and implying a common salivary origin, it has become common practice to divide dental calculus into two types viz. supragingival and subgingival. Supragingival calculus, on this basis, is described as light in colour unless darkened by smoking, medicaments or other agents. Subgingival calculus is usually depicted as dark brown or dark green in colour, and harder and more compact than the supragingival type.

Based upon the location of calculus on the tooth surface at any given time, and from an operative viewpoint, this division into 'supragingival' and 'sub-

gingival' is of some value. Also, there is no doubt that two types of dental calculus differing in certain physical properties do exist. Nevertheless, as the microscopic evidence plainly shows, calculus that originated as subgingival deposit may become, through topographic changes in the soft tissues, a supragingival deposit. Therefore, it can readily be seen that on the initial basis, which involves differences in physical properties, this division of dental calculus is not entirely valid.

A survey of the many theories of calculus formation reveals the fact that there is as yet little agreement of opinion among investigators in this problem. According to Bibby³ the most common views fall into two main groups, viz: (1) that calcium salts are precipitated from the saliva by physico-chemical processes, and (2) that this precipitation is brought about by bacteria.

In the first group, Kirk⁴ attributed the precipitation to loss of CO₂ from the saliva. His stated opinion was as follows: "As saliva contains CO₂ in solution, the escape of this gas which was the solvent causes a precipitation of salts in the presence of the colloidal mucin in combination with which it deposits as tartar on teeth." Prinz believes that

* Presented at the Canadian Dental Association Session of the Ontario Dental Association Convention, May 18th, 1942.

through the concentration of salivary colloids at the surface, the solvent power of the saliva is lowered and the calcium salts are liberated. The surface colloids form an insoluble pellicle which entangles the freed calcium salts and sinks into the medium to become attached to foreign surfaces. With successive films so attached, a concretion is formed.

Smith⁵ of Melbourne showed that desquamated epithelial cells liberate an enzyme, phosphatase, and he believes that through the action of this enzyme on the organic phosphates of the saliva, inorganic phosphates are formed which enter into calculus formation.

In the second group, viz: the viewpoint that the precipitation of calcium salts from the saliva is effected by bacteria, Klebs, and Goodrich and Moseley⁶, ascribed the cause to *Leptothrix* organisms. Soderlund⁷ held that *Actinomyces* were responsible. Bulleid⁸ noted an intimate relation between calculus production and an organism he termed *Leptothrix buccalis*. Naeslund⁹ concluded from his investigations that both *Leptothrix* and *Actinomyces* were involved in calculus formation. According to this investigator's hypothesis, these organisms produce two effects which favour the precipitation of calcium salts, first, an increase in alkalinity of the surrounding medium, and second, a decomposition of proteins.

Bibby carried out histological and bacteriological studies and found that *Leptothrix* organisms were predominant in dental calculus. Through his extensive experiments he brought to light the important finding that without the presence of microorganisms, no deposits of calculus were formed. He also pointed out that all the phenomena of calculus formation cannot be explained on a bacterial basis and that certain physico-chemical processes may furnish a satisfactory solution for some of the facts.

From clinical observation, it is apparent that in calculus formation two stages are involved. In the first place, soft organic material is laid down on the surface of the clinical crown. This has been described as comprising desquamated epithelial cells, pus cells, mucin, food debris and bacteria.^{10 11} Later, calcifying processes take place in this deposit with the gradual production of fully formed calculus. It is of great interest to note that, many years ago, Black¹² referred to the greasy nature of the first soft deposit.

It cannot be without significance that calcification also occurs in deposits of exfoliated cells and cell detritus in tonsillar crypts. According to Delafield and Prudden,¹³ these deposits may occlude and distend the mouths of the crypts in chronic tonsillitis.

In the field of investigation of dental calculus formation, considerable work has been done on the analysis of masses of the calcified deposit. Histologic studies of sections of calculus have also been undertaken. The numerous hypotheses that have been advanced attest to the complexity of the subject and the attention it has attracted. Many experiments have been carried out and still the field is replete with unsolved problems. For example, Rosebury and Karshan¹⁴ have recently called attention to the lack of information concerning the chemical nature of the organic content.

In any investigation into the nature and origin of dental calculus, it seems obvious that a careful microscopic examination of well-made sections of developing calculus 'in situ' would yield valuable information. This type of study is the logical basis for an appreciation of the process as a whole, and of the various phases in their relationship to each other. One is impressed, in a survey of the literature, by the marked scarcity of this kind of data.

HISTOLOGIC STUDY OF SUBGINGIVAL CALCULUS 'IN SITU'

The microscopic picture of human subgingival calculus 'in situ' and under advancing conditions commonly shows a layer of organic material between the epithelium lining the crevice and the main body of calcified deposit.

Frequently two different zones are to be distinguished in this layer. Bordering upon the epithelial lining is a cellular zone varying in depth and in which varying numbers of desquamated epithelial cells and leucocytes are to be noted. These cells are in different stages of disintegration. Occasionally red blood-cells are to be seen in this zone, and undoubtedly some blood-serum is generally present.

Between this zone and the calculus proper, a zone of homogeneous material is usually to be noted. It also varies in thickness. The material appears to be finely granular in character and it seems evident that it is formed largely as a result of disintegration of the cells from the adjacent cellular zone. While some nuclear fragments are frequently to be observed in the homogeneous material, in general, in this zone, cell boundaries are no longer to be distinguished and the nuclei no longer stain.

Occasionally a striking phenomenon is exhibited in the microscopic picture in which there is a progressive transformation extending from the crevice epithelium to the homogeneous material. This change usually begins in the region of the epithelial attachment and frequently involves a portion of it. Fig. 1. Fig. 2.

The cellular and homogeneous zones are sometimes not so well demarcated, and the layer of soft material between the crevice epithelium and the forming calculus is comprised of intermingled cellular and homogeneous elements. At



Figure 1

Human subgingival calculus in process of formation showing layer of organic material lying between crevice epithelium and the calculus proper. a. crevice epithelium; b. cellular zone; c. homogeneous zone; d. zone of developing calculus; e. calculus proper; f. cementum; g. dentine. Note the apparent loss of vitality of the epithelium in the region of the attachment (b), and the blending of the cellular detritus with the homogeneous material.

Figure 2

Higher magnification of Fig. 1 in region of the epithelial attachment. a. homogeneous zone; b. cellular zone; c. cementum. Note the gradual transformation that has taken place from the epithelium to the homogeneous material.



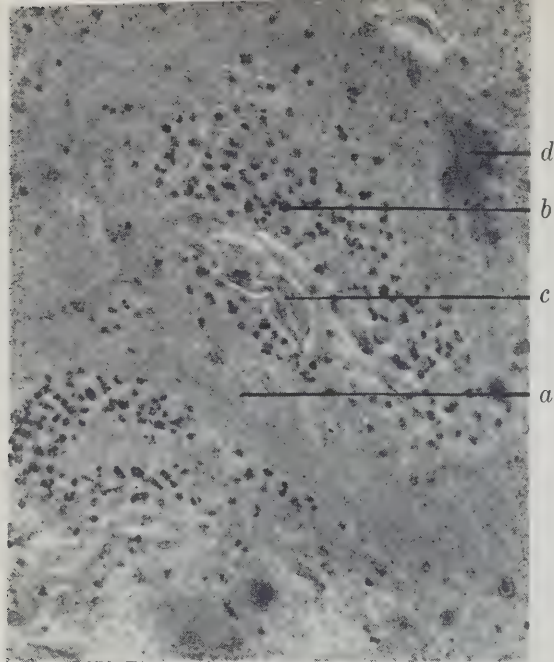


Figure 3

Fairly high magnification of intermixed tracts of cellular and homogeneous material. a. homogeneous material; b. leucocytes; c. epithelial cells; d. small focus of calcification.

times this layer is relatively narrow. Fig. 3.

The homogeneous material appears to form the background for the developing calculus. As it constitutes a field for the advancing deposit, it bears an important relation to the main mass of fully formed calculus. It seems to provide a suitable medium for the growth and colonization of those organisms that are responsible for the precipitation of the calcium salts.

From the progressive border of the main calculus, myriads of thread-like organisms project into the adjacent soft material. They constitute feather-like or tufted colony extensions which give to the edge of the deposit a most irregular appearance. Fig. 4. Fig. 5.

Countless filamentous organisms are

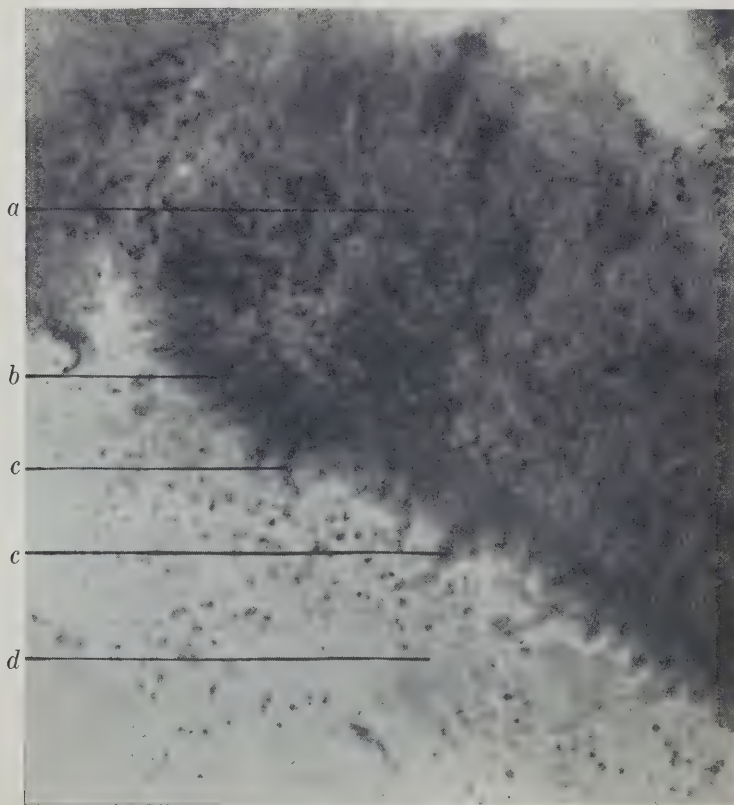


Figure 4

Fairly high magnification of the progressive border of a main mass of calculus. Note the tuft-like colonies of thread-like organisms extending into the homogeneous material. a. formed calculus; b. advancing border of calculus; c. tuft-like colony of organisms; d. homogeneous material.

The Formation of Subgingival Calculus

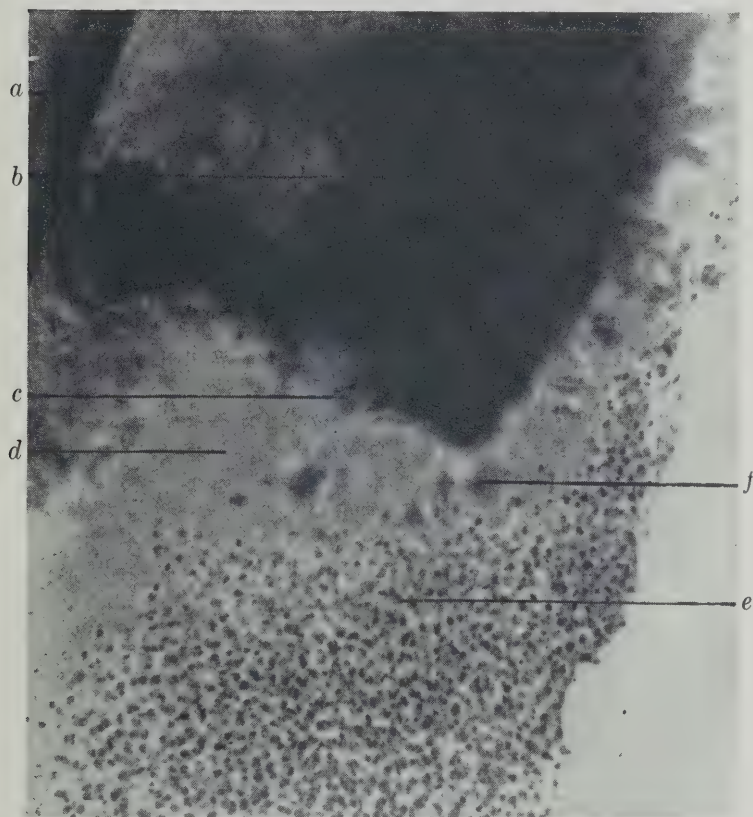


Figure 5

Mass of calculus on the cementum showing the advancing border, and the homogeneous and cellular zones. Note the irregular appearance of the calculus border, and the isolated colonies of organisms in the homogeneous material. a. cementum; b. formed calculus; c. advancing border of calculus; d. homogeneous material; e. cellular material; f. colony of organisms.

present in the homogeneous material. A salient feature is the presence of numerous colonies, varying in size and shape, and which exhibit the peculiar radiating and lobulated masses of mycelium similar to those found in actinomycosis. Some of these colonies join to form large masses of organisms. Others fuse with the main body of calculus. Fig. 6.

From a careful examination of these colonies, it would appear, as Naeslund has pointed out, that the organisms are responsible for the precipitation of the calcium salts. This is suggested by certain changes that take place. A bluish haziness with the regular method of staining with haematoxylin and eosin appears in and about each colony whereby it is rendered cloudy and the organisms

obscured. This occurs in the colonies on the border of the main deposit and also in those that are isolated. Where this occurs in colony groups, there is produced an agglomerate of calcifying material which at a later time will become a part of the main deposit. Fig. 7. Fig. 8.

Examples are to be seen in the microscope where subgingival calculus is continuous with calcified deposit on the tooth surface that must be termed supra-gingival. In interproximal deposit, frequently the formations on adjacent teeth are fused so that one mass of calculus is produced. Crownward from the gingival margin, and between the two tooth-borne deposits, intermixed tracts of cellular and homogeneous material are

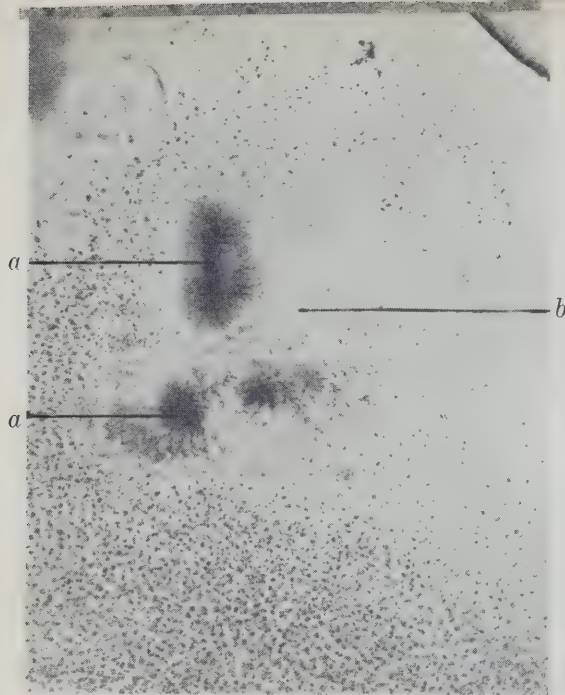


Figure 6

Colonies of organisms growing in the homogeneous material. Note the peculiar radiating appearance similar to the masses of mycelium seen in actinomycosis. *a.* colony of organisms; *b.* homogeneous material.

usually found. The soft tissues constitute the obvious source of this material and the phases that occur in the development of the calculus seem in no way to differ from those that take place subgingivally. And further, it seems difficult to conceive that there is much penetration of saliva in these remote regions so well protected by such impervious material. Fig. 9.

The microscopic evidence would strongly tend to support the viewpoint expressed by Colyer,¹⁵ Bunting and Hill,¹⁶ and the essayist¹⁷ that these calcified formations are often the result of inflammation and are derived in large part from exudative products that accumulate in the gingival crevice.

Matthews¹⁸ has described lipids as "ether-alcohol soluble fat-like substances found in different cells and tissues." He

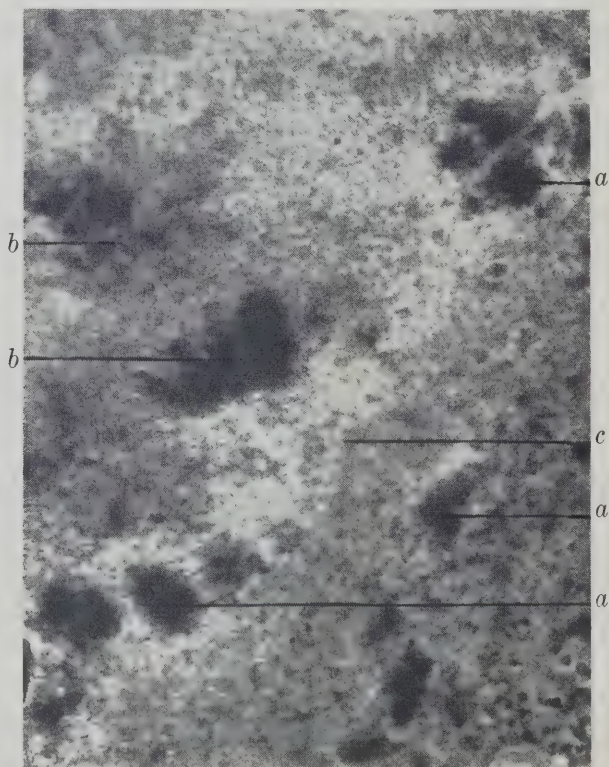


Figure 7

Numerous colonies of organisms in the homogeneous material, in which there is an apparent precipitation of calcium salts. Note that the organisms are obscured. *a.* colony showing calcifying changes; *b.* mass of coalescing colonies; *c.* homogeneous material.

The Formation of Subgingival Calculus

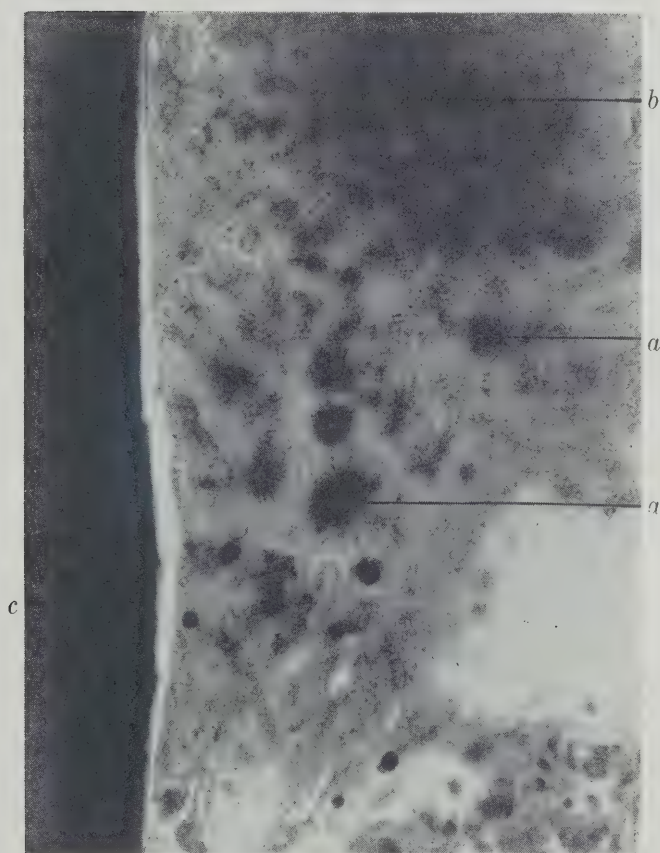


Figure 8

Fairly high magnification in the region of the epithelial attachment showing a cluster of actinomyces-like colonies in the homogeneous material. Note above this cluster, the agglomerate of colonies showing calcifying changes. a, actinomyces-like colony; b, agglomerate of calcifying material; c, cementum.

has pointed out that the amounts in different cells and tissues vary widely but "in general a tissue composed chiefly of living matter, but not serving as a depot of fats, contains from one to ten per cent by weight of lipides." As a rule these substances have a greasy or waxy appearance. It is important to recall at this point the observation of Black that the first soft deposit in calculus formation is greasy to the feel. It is not surprising therefore that in our laboratory tests, soft calculus has been found, in all

cases, to yield, on ether extraction, substantial quantities of fatty material. Fig. 10. Fig. 11.

B. THE CALCULUS-CARIES ANTAGONISM

The conception that the processes concerned in calculus formation and caries production are fundamentally antagonistic has long been held by many dental observers. Miller¹⁹ pointed out years ago that fats and calculus deposited upon the tooth surfaces retard the caries process. Recently Coolidge²⁰ has referred to the

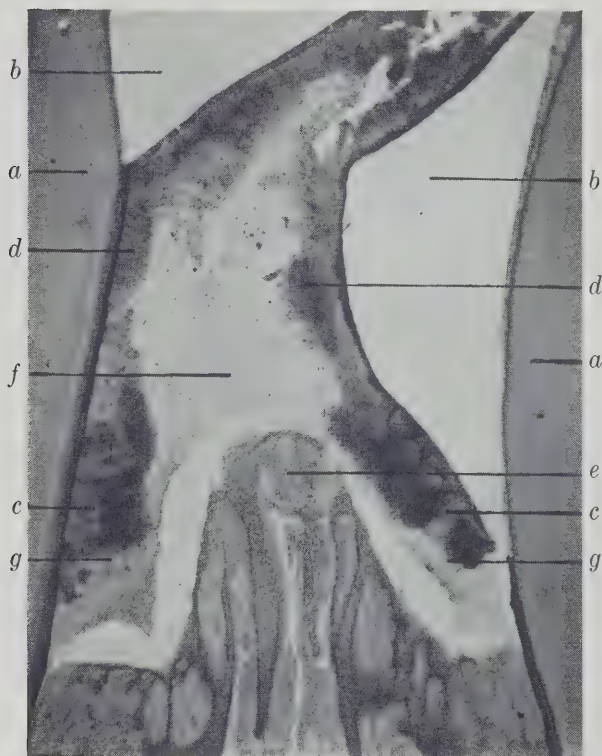


Figure 9

Low magnification of subgingival and supragingival calculus on adjacent teeth, fused to make one mass of deposit. The interior is composed of soft organic material from the gingival tissues and into which the calcifying processes are extending. It would appear that the borders of the advancing calculus are well protected from the saliva. a. dentine; b. enamel space; c. subgingival deposit; d. supragingival deposit; e. interproximal gingiva; f. homogeneous and cellular material; g. advancing border of calculus.

freedom from calculus to be observed in individuals very susceptible to dental caries.

According to Rosebury's²¹ observations in a recent study of Alaskan Eskimos, the general existence of deposits of calculus "was inversely correlated with the incidence of dental caries."

The formation of dental calculus in the mouths of children under ordinary conditions is relatively uncommon. Boyd and Drain²² have observed that in diabetic children on a high-fat low-carbohydrate diet, dental caries was arrested and abundant calculus formation

occurred. MacGregor and Simpson²³ of Toronto have also noticed that children with celiac disease and on a special diet showed a marked immunity to caries, and rapid calculus production. In many cases the immunity to caries was absolute, and the calculus was formed in the occlusal grooves and on the labial surfaces of the lower anterior teeth.

A most important observation has been recorded a short time ago by Lyons²⁴. This investigator has had the opportunity of observing for some years, a number of patients who worked in candy factories or in the baking industry. In

one group, the individuals were employed in factories making a preparation containing flour, sugar, powdered egg, powdered milk and flavouring agents. Lyons has stated that "the individuals did not show any tendency to an increase in caries percentages but invariably they presented for dental examination with tremendous quantities of calculus and the teeth were covered with a soft pabulum-like deposit."

It is well known that the inhalation of flour and sugar dust by millers and candy-workers is usually associated with the rapid production of dental caries. It seems manifest, therefore, that when powdered egg and powdered milk are carried to the mouth along with the flour and sugar, something is introduced which forms a medium favourable to the growth of organisms that precipitate calcium salts. And also this background is

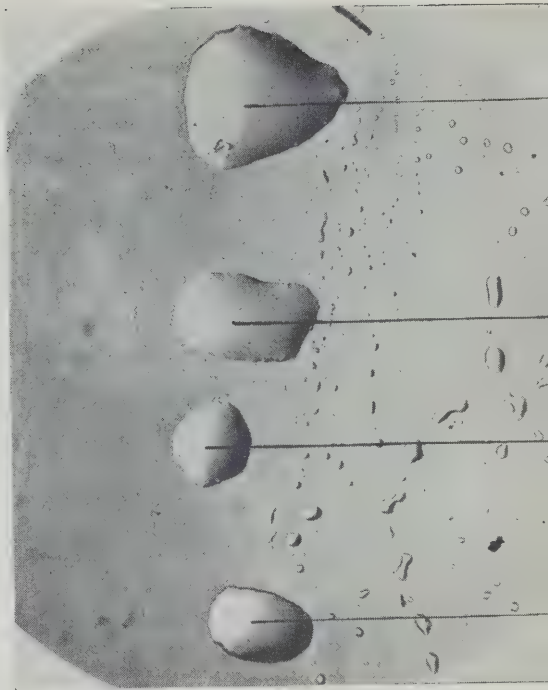


Figure 10

This illustration shows unstained fatty material obtained by ether extraction of soft dental calculus. a. fatty material; b. calcified fragment.

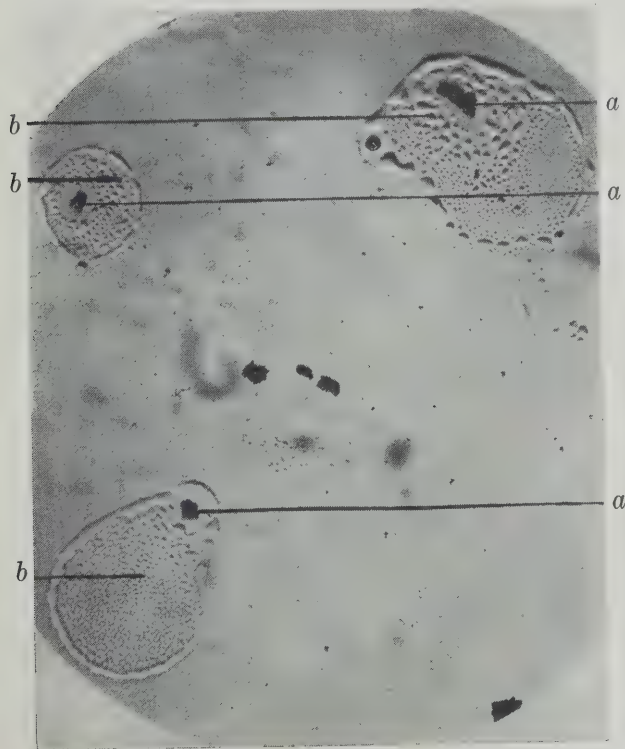


Figure 11

Zones of unstained fatty material surrounding small fragments of calcified deposit. The calculus was first crushed and then treated with ether. This fatty material in all cases stains blue with Nile blue sulphate, an indication of its fatty acid nature. a, calcified fragment; b, zone of fatty material.

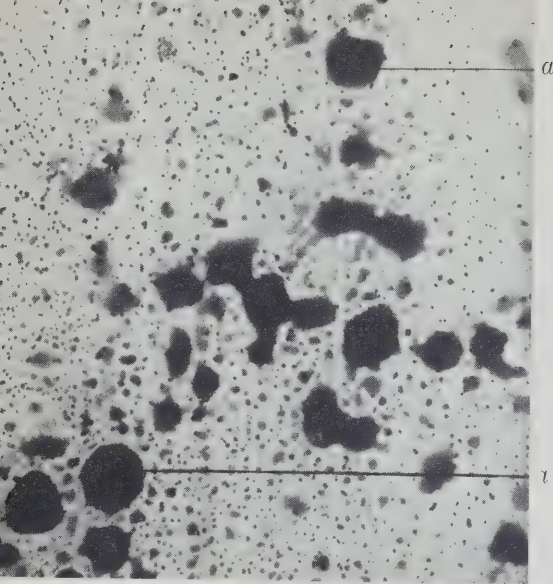


Figure 12

Fatty material obtained from the film or pellicle which forms on standing or incubated saliva. It is stained with Nile blue sulphate. a. globule of fatty material.

at the same time rendered unsuitable for the colonization of acid-forming bacteria which in a medium of flour or sugar alone would flourish and initiate dental caries. The fact that rapid calculus formation takes place under these conditions of added egg and milk points in a marked degree to the importance of the nature and amount of the soft deposit in this process.

It is known of course that egg yolk is a rich source of ether-soluble lipids, including phospholipids. According to Hilditch,²⁵ they amount to about 30-35 per cent. of the fresh egg yolk. Some of the phospholipid is apparently bound to one of the egg-yolk proteins, vitellin, which has the characteristics of a globulin.²⁶ Milk also contains relatively large amounts of fats (2-4 per cent.)²⁷

It is noteworthy and very significant that Orban and Weinmann²⁸ found that the salivas of caries-free individuals contain more epithelial cells than the salivas of caries-susceptible persons. The reverse was found to be the case in regard to the presence of leucocytes in the saliva.

Fatty substances are known to be present in the stratum corneum of the skin, as well as in the deeper epithelial layers.²⁹ Unna and Golodetz³⁰ have demonstrated the presence of oleic acid and fatty acid esters in the horny layer. According to our laboratory tests, the film or pellicle which forms on standing or incubated saliva is largely comprised of fatty acid material. With Nile blue sulphate it stains dark blue. Fig. 12.

C. RELATIONSHIP TO THE PROBLEM OF ORAL HYGIENE

It was demonstrated in our laboratory in 1938³¹ that when a small amount of sodium oleate was added to a solution of buffer salts (phosphates) of pH 5.0, the enamel surface of teeth suspended therein was protected from attack. Without the sodium oleate, evidence of decalcification was to be noted in 24 hours. As the soaps of the higher fatty acids cannot exist in solutions of pH 9.0 or lower,³² it means that free oleic acid was present on the tooth surface.

The protective action of oleic acid has since been shown in various ways. In one case, fragments of ground sections of human teeth were suspended in a buffer mixture of phosphates adjusted to a pH of 4.5 by the addition of lactic acid. The tooth substance was markedly protected from decalcification on the addition of a small amount of oleic acid. This was shaken with the solution.

Matthews³³ recently (1939) in a discussion of the role of the liver in fatty acid catabolism has referred to the protection given to the stomach and intestinal mucosa by these acids. In 1939, McCollum, Orent-Kieles and Day³⁴ have suggested that fat in the diet may have an important role in protecting the tooth against acid attack at a site of actual or potential caries. The tooth is visualized as being greased with the food-fat, and the coating thus formed, being imper-

The Formation of Subgingival Calculus

vicious to acid gives protection to caries-susceptible areas.

Agnew,³⁵ in his Tibetan surveys, found that certain tribes exhibiting the highest immunity to caries of the various peoples examined, lived largely on a diet of rancid butter-tea and barley flour. A recent analysis of the Tibetan butter showed the presence, in two samples examined, of 42 per cent. oleic acid.

The writer has frequently observed that, on the removal of glutinous films containing epithelial cells, leucocytic debris, mucin and bacteria, the tooth surface when viewed with a magnifying glass showed no evidence of early decalcification. This is in accord with the hypothesis³⁶ that in calculus formation the protective factor against the initiation of caries is primarily an inherent property of the first soft deposit regardless of subsequent calcifying changes.

The viewpoint that immunity to dental caries is commonly associated with grimy conditions of the tooth surface is often encountered in dental literature. Nevertheless the conviction that extremely clean tooth surfaces are greatly to be desired from a caries-preventive standpoint seems to be firmly established in the general dental mind.

Noyes³⁷ has pointed out that "caries shows the greatest intensity in comparatively clean mouths." Lyons³⁸ has observed in the mouths of candy-workers where caries was rampant that the teeth were in a better than average state of hygiene.

Wallace³⁹ has noted that "the ill-cared-for and dirty mouths of hospital patients were remarkably free from dental caries." And Ylppö⁴⁰ of Finland found that "caries is not a symptom of 'myxoedema congenitale' although mouth hygiene in this disease is unsatisfactory."

Both Wallace and Grieves⁴¹ have observed a distinct predisposition to caries following thorough and regular cleansing

of the tooth surfaces under some conditions. Grieves felt that something had been lost or that some protective process had been neutralized.

It seems to be plainly indicated from the foregoing that some forms of organic coatings on the tooth surfaces exert a protective influence against the caries process. It is also known that some forms of soft deposit are accompanied by caries. Nevertheless in view of the clinical evidence, it would appear that, from the caries standpoint, too much emphasis has been placed on the periodic cleansing and polishing of the enamel surfaces and too little attention given to their protection.

We know from clinical experience that some forms of organic debris on the tooth give rise to toxic products which bring about inflammatory changes in the gingival tissues. It would seem therefore that the ideal normal must comprise a high degree of protection and a reasonable state of cleanliness.

In brief and general terms, it now remains for further research to give to the dental profession adequate information on the nature of the protective substances, the factors, general and local, that provide them, and the agents that tend to deplete or remove them. When suitable tests based on these findings are available for clinical application, the practice of oral hygiene can then be conducted on a scientific basis.

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"The Community is concerned with the maintenance of professional standards which will insure not only competency in individual practitioners, but protection against those who would prey upon a public peculiarly susceptible to imposition through alluring promises of physical relief."—Chief Justice Hughes.

A Review of Actinomycosis

by W. SCOTT HAMILTON, D.D.S., Edmonton, Alberta

THE following is a review of the fifty cases of Actinomycosis treated at the University Hospital, Edmonton, since 1930.

The relatively small number substantiates former contentions of the rarity of this disease in man. The work was prompted by a dentist with a large surgical practice of several years who informed me that he had never seen a case that he was able to recognize. This is not unusual, for diagnosis is rather difficult. He was also anxious to know if the disease was more common in some parts of this province than in others. My investigation does not show that this is particularly the case, except to say that it is found chiefly in farming communities. Of the fifty cases, forty-four were from the farm or associated occupations, one a tinsmith, one a motor mechanic, one a miner, one a nurse, one a female medical student and one a hospital orderly.

The lesions were distributed as follows:—

Cheek and mandible—25.

Tongue—1.

Neck—11.

Temporal and Frontal—3.

Lungs and spleen—1.

Lungs—1.

Thigh—1.

Penis—1.

Abdomen—6.

The youngest—6 years.

The eldest—69 years.

The average age—33 years.

All cases of the head were discharged as improved. All lung cases were fatal. Four out of six abdominal cases were fatal and one other refused treatment

and left the hospital at his own request and in very poor condition. There were seven cases re-admitted to hospital. This however does not mean that there was recurrence in only seven cases. Many of these patients were transients and others may have been admitted to other hospitals. Authorities claim that there may be recurrence up to ten or twelve years.

Positive smears were obtained in only nineteen cases. This is an important observation from a diagnostic standpoint. Positive smears are difficult to obtain even when the clinical picture appears unquestionable. Smears, or better a quantity of pus should be taken daily for examination. If sulphur granules are seen it is considered positive. The ray fungus is a gram positive filament.

One case in particular demonstrates the necessity for diligence if a positive smear is to be obtained. Fourteen negative smears had been taken. Thereafter it was decided to remove a partially erupted third molar. This was sent to the laboratory for examination and proved to be positive.

In these cases the different treatments included, heavy doses of potassium iodide by mouth or sodium iodide intravenously, sulphonamides, x-ray and ultra-violet therapy, incision and Dakin's irrigations. One patient tolerated 400 grains of potassium iodide daily.

From the case histories the onset would appear to be a minimum of two weeks. One patient experienced a numbness of the tongue and lips immediately after sleeping in hay. This was followed two weeks later by involvement of the tissues at the angle of the mandible. The numb-

ness was, in all probability, due to allergy and not associated with the disease.

About fifteen of the mandibular cases followed the removal of teeth, mostly lower third molars. If for no other reason than to protect his reputation, the dentist should be familiar with the clinical manifestations of the disease. While the removal of teeth is not contra-indicated it must be remembered that the disease continues to progress after their removal, and it is in these cases that the dentist is so often held responsible by the patient. For this, as well as other reasons, teeth should not be removed where there is acute inflammation, trismus of muscles or hard edema, without pre-operative treatment for several days. If after heat and drug therapy, the edema remains firm, one should suspect actinomycosis. The swelling is quite soft at first but gradually becomes firm and is associated with contraction of the muscles.

Within the last two weeks the writer had a case referred with just such a condition. The patient's temperature in the office was 100, the pain was persistent but not severe, the swelling at the angle of the mandible while not excessive was very hard and associated with a

partially erupted third molar. The mucous membrane was beginning to show folds, evidence of underlying granulation. The patient was admitted to the hospital and treatment consisting of hot fomentations and sulphathiazole gr. XV q4h was instituted. After three days there was no appreciable change. Inductothermy was added to the treatment and at the end of another three days there was still no improvement. A provisional diagnosis of Actinomycosis was then made, which was confirmed by one of the surgeons. The lower third molar was removed and smears are being taken daily. No positive smear has yet been found, but the patient is under treatment for the disease nevertheless.

The dentist as well as the physician should think of Actinomycosis in all cases of chronic inflammation and particularly where it is associated with trismus of the muscles, limiting the opening of the mouth. Delay in treatment, because of the difficulty of obtaining positive smears, may lead to unnecessary destruction of tissue and danger to life. The dentist may not be directly interested in the form of therapy employed, but it is his duty to see that treatment is instituted as soon as possible.

Eastern Ontario Dental Association Convention

The 65th Annual Convention of the Eastern Ontario Dental Association will be held at Brockville, October 18-19, in Hotel Manotonna.

On Sunday, the 18th, there will be golf at Brockville Golf and Country Club in the afternoon, and a musical and social hour in the evening.

The following guest speakers will appear on Monday:

Dr. Edward J. Ryan, of Evanston, Ill., U.S.A., Editor of Dental Digest and Oral Hygiene.

Dr. William L. Chalmers, Exodontist of Toronto, Ontario.

Dr. H. J. Hodgins, Director of Dental Services, Department of Health of Ontario.

Dr. T. R. Marshall, of Toronto, Chairman of the Public Health Committee.

Also several high-ranking officers of the Canadian Dental Corps will speak.

Principles for Dental Health Services

ADOPTED BY THE CANADIAN DENTAL ASSOCIATION

MAY 18th, 1942

1. That the plan be national in character.
2. That each Provincial Government be free to choose the adoption of the plan, the method of application best suited to meet the dental needs of its people, and the administration of the monies.
3. That the administration of the plan be through the co-operation of the Provincial Government and the Dental Board as provided under the Provincial statute regulating the practice of dentistry, of the various provinces as constituted at the present time.
4. That the practice of dentistry be carried on in the private office of the dentist except under circumstances not favourable to private practice.
5. That the regulating of the plan and the proper allotment of funds to be expended for dental health service be proportioned and adjusted by agreement between the Provincial Government and the Provincial Dental Board as defined in Clause (3). A standing committee to be set up for that purpose. This committee to consist of five persons, three appointed by the Dental Board and two by the Provincial Government.
6. That the following features be observed:
 - (a) Every qualified dentist in good standing to be eligible to practise under the plan.
 - (b) The patient to have freedom of choice of dentist and the dentist to retain the right to refuse attendance upon a patient subject to geographic, ethical or professional considerations.
 - (c) The basis of dental service be, to make available the services of the dentist in general practice—the referring of patients for any special services to be made through said dentist.
7. That preventive dentistry rather than restorative dentistry shall hold a dominant position.
8. That there shall be no interference with the development and progression of the recognized dental professional standards.
9. That adequate provision shall be included for the encouragement and support of research in dentistry.
10. That any plan adopted shall provide for the indigent on an equal basis with those who are in a position to make contributions.
11. That the determination of the need for dental services shall be the prerogative of the dental profession.

With our present knowledge of anaesthetics, and the materials at our disposal, I think that I am quite safe in saying that at least ninety-five per cent of all dental operations should be performed painlessly. Any time that I hurt a patient needlessly, I feel that I am not performing up to standard. And yet it is amazing the number of patients who present themselves for treatment, who have never had a tooth anaesthetized for cavity preparation.—William Miller, D.M.D., Vancouver, B.C.

PRESENTATION ON THE SUBJECT OF *National Health Insurance for Dentistry in Canada*

To The Advisory Committee on Health Insurance, Department of Pensions and National Health, Ottawa.

Gentlemen:

The Committee on National Health Insurance appointed by the Canadian Dental Association, representing the dental profession of Canada, makes the following presentation:

PRESENTATION

The Canadian Dental Association at the request of the Dominion Department of Pensions and National Health desires to present the following outline plan for the co-operation of the Dental Profession in a health insurance arrangement.

While we do not desire to be understood as advocating the introduction of a health Insurance Plan without much further study than has yet been given to the problem, we do wish to record our conviction that it would be undesirable to introduce any public health or health insurance plan without the inclusion of the essentially preventive dental service proposed herein.

We do not think that any plan will do away with dental disease in its entirety. We firmly believe however that the arrangement herein suggested will reduce the amount of such disease as far as is humanly possible.

During the childhood period is the most feasible and economical time in the life of the individual when control of dental disease can be put into effect. The ravages of dental caries among the

children of the nation is a well known condition among all public health officials, often spoken of as a national disgrace. It is pointed out that surveys, where no school dental services have been in effect, now show a condition of 95 to 98 per cent of the children possessing carious teeth. In those municipalities where such service has been instituted for some years the incidence of dental caries is reduced a considerable amount, varying from 40 to 50 per cent in many instances. A factor which hitherto has militated against the reduction of dental disease has been the lack of financial resources in many cases. The provision of this financial support would produce a better situation, the result of which should be the establishment of a future Canadian population possessing abundantly more dentally fit oral conditions. The Dental Profession does not wish to go on record, due to lack of personnel, as able to care for all the insured herein suggested but does undertake to carry out the proposed plan to the best of its ability.

The profession, taking into account the available personnel and the wise expenditure of monies, are long since convinced that the only method of properly attacking the problem of dental disease is through the child. The retaining of a child's mouth in a condition of health is an objective far more obtainable than making any attempt to remedy the condition of the dental cripples among the whole population.

Basing this presentation on the above statement, we present the following plan:

National Health Insurance for Dentistry in Canada

INSURED PERSONS

The institution of a compulsory dental health insurance plan for all children up to the attainment of age sixteen.

ADMINISTRATION

1. The Lieutenant Governor-in-Council in co-operation with the Provincial Dental Boards (as defined in principle No. 3 attached to this presentation) shall establish a Central Dental Committee and Regional Dental Committees. These Committees shall be responsible to the Director of Health Insurance for the administration of all dental services and all that relates to the practice of dentistry under the Health Insurance Act.

2. There shall be established a Provincial Council on Health Insurance representing the Medical Profession, the Dental Profession, the Nursing Profession, Pharmaceutical Profession and Hospital Council and lay persons comprising industry, labour, and women's rural and urban organizations, (providing that the majority of the members shall be licensed medical and dental practitioners in good standing).

3. There shall be established a Dominion Council on Health Insurance on which there shall be representatives of the Medical, Dental, Nursing, Pharmaceutical professions, the Hospital Council, and lay persons, representing industry, labour and women's rural and urban organizations, providing that the majority of the members shall be licensed medical and dental practitioners in good standing.

4. There shall be a Commission set up for the purpose of administering the Health Insurance Act.

5. In the event that Inspectors are found necessary under the operation of the Health Insurance Act, as it pertains to Dentistry, such Inspectors shall be members of the Dental Profession in good standing.

BENEFITS AVAILABLE TO EACH INSURED PERSON

1. A dental examination shall be given once every six months.
2. Prophylactic treatment shall be given once every six months, when necessary.
3. Plastic filling materials shall be used in restorative work.
4. Provision shall be made for the use of special materials and appliances for the treatment of accident cases.
5. Extractions and necessary dental surgery to be performed when necessary.
6. Anaesthetics shall be used where necessary.
7. Arrangements shall be made available whereby the patient may be referred for special services.
8. Radiograms to be used where considered necessary.
9. Provision shall be made for the use of such other materials as may be required in carrying out the usual procedures in the practice of dentistry for children.

BASIS OF PAYMENT

For all children up to the attainment of the age of 16 years who come under the provisions of the Health Insurance Act, there shall be provided payment in full from the Insurance Fund to the dentist, based upon a schedule of fees as recommended by the Provincial Dental Board.

EXPLANATION

The plan shall be advanced from the attainment of the age of 16 years upwards to 17 years, etc., as is deemed advisable from time to time according to the availability of personnel, financial support and general considerations. It will be realized that the added ages will be, in the main, composed of those who have been under the provisions for dental services. By the

gradual increase of the age at no time will the plan be faced with the problem of the accumulated dental needs.

The Dominion of Canada would be in the position of being the first country to institute a definite and thorough plan of control in the field of public health as far as dentistry is concerned. In the event of a physical examination of manpower at some future time after the plan had been in operation, the result would be far different from that experienced at the beginning of the present war, when it was found that approximately 23 per cent of the available manpower were discovered to be unfit for enlistment due to dental defects.

This plan is supported by the Canadian Dental Association for the reason that it is believed to be the only one economically sound and within the power of the Dental Profession to supply the necessary service with the available personnel at the present time. Further, the Dental Profession in Canada has no desire to enter into an arrangement in which the requirements for dental services are such that the profession has no means of supplying, even if the financial outlay required were underwritten. It is the considered opinion of this body that any attempt to render impossible services would result in not only the failure of the entire arrangement, but would bring great discredit upon the profession of Dentistry.

To meet the demands of the future expansion of the Health Insurance Plan, as

it affects dentistry, the following proposals are submitted:—

1. For dental research, in an effort to reduce the incidence of dental disease, an annual grant to be made.
2. For dental health education of the public in general and the Dental Profession an adequate annual grant to be made. The profession is convinced that education on dental public health is essential for the success of any such plan, as has been proven by past experience, and fully believe that such effort will materially reduce the cost of treatment.
3. For dental education in view of the fact that the personnel will need to be drastically increased in order to cope with the future increase in numbers of insured individuals, a sufficient amount to aid the Dental Schools of Canada.
4. That at the time of increasing the age limit under the Plan, adjustment will be made in the Health Insurance Act insofar as it affects dentistry both in the benefits to be provided and the basis of payment. These and any other future adjustments to be made with the co-operation of the representatives of the Dental Profession in Canada.

This outline as herein presented was adopted both by the Board of Delegates of the Canadian Dental Association and later at an open meeting of the Association held at the City of Toronto, May 18, 1942.

Presented at Ottawa
on June 9th, 1942.

Notice

We would suggest that our readers peruse the article entitled "The Cost of Living Bonus" appearing in the Ontario News Section of this issue of the Journal.

Report of the Delegate to the First Inter-American Orthodontic Congress*

AS A résumé of the joint meeting of the American Association of Orthodontists and the First Inter-American Congress held at New Orleans, March 6th, 1942, together with the course given during the following week at the Army Dental School, and the Walter Reed Hospital, Washington, have been reported already in the April issue of the *Journal* of the Canadian Dental Association (page 180), further report of the details of the two meetings will be omitted.

At the close of the New Orleans meeting, in order that all the countries of the Western Hemisphere might be represented at the Congress, the appointment was made of a Canadian delegate. Immediately following his appointment, the Canadian delegate telegraphed President Woodbury requesting confirmation of his appointment and authorization to represent the Canadian Dental Association in any discussions which might affect the Association. President Woodbury approved the appointment with the reservation that any proposals must, of course, be approved by the Board of Delegates. The association with the Latin American delegates for a full week in Washington was an interesting and profitable experience.

Arising out of several discussions the following recommendations received unanimous endorsement of the delegates: (1) That a Second Inter-American Orthodontic Congress be held. (2) That the delegates recommend to the dental associations of their various countries that all the Americas unite in an Inter-American Federation of Dentists. President Woodbury has received a letter from

Dr. Juan Ubaldo Carrea informing him of the meeting of the *Federacion Odontologica Latino Americana* and inviting Canadian participation in the proposed Congress to be held in Buenos Aires in 1944. Further amplification of the events leading up to the formation of the Congress are incorporated in the following excerpts from a recent letter from Dr. Daniel F. Lynch, Chairman of the Pan-American Dental Relations Committee of the American Dental Association:— "Back in 1939, when I sent Doctor Carrea a complimentary copy of *Dental Caries*, I suggested the desirability of the exchange of dental knowledge between the Americas. Doctor Carrea came back with an invitation to visit Argentina and he asked the American Dental Association to participate in the Fifth Dental Congress of the *Federacion Odontologica Latino Americana*. Doctor Carrea is the President of the F.O.L.A. (*Federacion Odontologica Latino Americana*). This organization is made up of all of the national dental associations of Latin America. I understand that every two years they hold a small scientific meeting, devoted almost exclusively to table clinics and that once every four years they hold meetings which combine legislative, scientific and social activities. The four-year meetings are really international dental congresses, and the one in 1944 is to be their fifth such meeting. When I received Doctor Carrea's letter, I took the matter up with our State Department. They thought it a good idea and suggested that I get the A.D.A. interested. Accordingly I took the matter up with Doctor Wilfred Robinson, who was then

* Presented at the Delegates' Meeting of the C.D.A., Toronto, May, 1942.

President, and he immediately appointed me Chairman of a new committee to be known as the Pan American Relations Committee. Its main purpose is to unite under the auspices of the American Dental Association all efforts and endeavours by individual dentists to communicate with our Latin American colleagues. Naturally, one of the functions of this Committee, therefore, was to consider the informal invitation which Doctor Carrea has extended.

"This year, as a result of my trip to South America last summer, the invitation became official. I have received a formal invitation from the F.O.L.A. asking the A.D.A. to send delegates and to participate in the Fifth Dental Congress. Because Doctor Carrea is anxious to have all of the dental associations of all of the Americas participate he asked me to 'feel out' the reaction of the Canadian Dental Association to the idea. I did so by contacting your President, Dr. Woodbury, and suggested to him and to Doctor Carrea that they get in touch with each other. In the meantime I have been officially appointed, by the Executive Council of the F.O.L.A., Representative and Advisor of the Federacion Odontologica Latino Americana in North America. In this capacity I advised Doctor Carrea to invite Canada officially to participate in the dental congress. This, I assume, has already been done.

"Therefore, since the proposed dental congress will be much larger than any previous meeting, and since it will embrace for the first time all of the dental societies of all of the Americas, the name of the Congress should be changed to either "First Inter-American Dental Congress," or "The First Pan American Dental Congress" whichever name seems more appropriate.

"In any case, as I understand it, at this first meeting, the American Dental Association and the Canadian Dental Association

are asked to send representatives who will be the guests of the F.O.L.A. They will participate in the meeting but our Associations will be in no way responsible for it. However, as a result of our experiences this year, we will be given the opportunity to consider becoming part of their organization. We will also be given the opportunity to participate more actively, if we wish, in future dental congresses which may be held in the Americas. In other words by accepting their invitation we are not committing ourselves to any future policy unless, after our visit, it is our desire to do so."

Your delegate recommends the participation of the Canadian Dental Association in an Inter-American Dental Congress and further recommends the appointment of a Committee to deal with this project. (3) That the invitation of President Woodbury to the dentists of the respective Latin American countries to become corresponding members of the Canadian Dental Association be confirmed by the Board of Delegates and the delegate from each of the Latin American countries receive official notification from the Secretary of the action of the Canadian Dental Association in order that he may extend the invitation to the other members of the dental profession in his country. Such members, upon payment of \$3.00 (the subscription price of the Journal) would be kept informed of the activities of Canadian dentistry. In this connection it should be kept in mind that the currency in some Latin American countries is considerably depreciated, and in at least one as much as 80%.

When the Executive of the Board of Governors of the Ontario Dental Association kindly invited the officers of the Canadian Dental Association to preside at the opening session of the 75th meeting of the O.D.A., it was thought appropriate to extend an invitation to those Latin American delegates who were tak-

ing post-graduate instruction at the Kellogg Foundation Institute at Ann Arbor, to be the guests of the Canadian and Ontario Dental Associations. In an effort to enlist the support of the Canadian Government in the project, Dr. R. A. Rooney communicated with Hon. J. A. MacKinnon, Minister of Trade and Commerce, who took an extended trip through South America last year. Mr. MacKinnon gave favourable consideration to the request to the extent that he referred the request of the Canadian Dental Association to the Inter-Departmental Committee on Publicity in Latin American countries. However, owing to previous commitments to attend the meeting of the Detroit Dental Association and to visit the Kellogg Foundation, Battle Creek, it was impossible for the Latin American delegates to accept the

invitation and Mr. MacKinnon's Department was immediately notified. This contact with the Canadian Government may be invaluable to the Association later.

In view of present world conditions, closer co-operation is inevitable between the professional men of the nations comprising the Western hemisphere. As members of the dental profession have such a profound influence upon the people with whom they come into daily contact, it would seem desirable that frequent intercourse be held with the members of their profession in the other Americas to cement cordial relationships, to foster international understanding and to promote American solidarity.

Signed: G. V. FISK,
Delegate First Inter-American
Orthodontic Congress.

Report of the Committee on Dental Legislation*

DURING the summer of 1940 we communicated with the officers of the Wartime Prices and Trade Board regarding some dental dealers increasing the price of the merchandise we use in our work. It was found that three companies had made no increase in their prices since the date of the Budget. Six companies had made some increases. In some instances it was admitted that, not having studied the legislation carefully, they merely added ten per cent to their selling prices. In every case, these companies have now adjusted their prices so that the increase in the final selling price does not exceed the exact amount which they have paid out in this tax. The stocks

on hand of these companies were also checked and it was found that only normal stocks were being carried in June.

As a result of this effort I believe that the dealers have not further increased their prices except where it was unavoidable.

INCORPORATION OF THE CANADIAN DENTAL ASSOCIATION

After securing the consent and approval of each of the Provinces the Bill of Incorporation was introduced in the Senate by Senator Cote and received its first reading on March 5, its second reading on March 10. It was considered by the Senate committee March 25 and

* Condensed from the Report presented at the C.D.A. Delegates' Meeting, Toronto, May, 1942.

received its third reading on the same day. It received its first reading in the House of Commons March 27.

On May 1 Mr. Honeywell told me an order had been passed that all private bills would be shelved after their first reading until the Public Bills were considered. There are at present about fifty private bills waiting for consideration.

DENTAL GOODS PLACED ON PROHIBITED LIST OF IMPORTS

In March, 1941, we interviewed Mr. W. D. Armstrong, of the Department of National Revenue, re the importation of cuspidor bowls and shields, tooth cleaning brushes and tooth shade guides which had been put on the prohibited list of imports. When those in authority were shown how necessary these articles were to the practicing dentist, arrangements were made to have them removed from the list of prohibited goods.

MAIL ORDER DENTURES

In September, 1941, we took up the matter of Mail Order Dentures with different Departments of the Government. We started with the Post Office Department. From there we went to the Customs Department. Mr. Armstrong, of the Customs Department, who saw that we were allowed to import cuspidor bowls, tooth brushes and shade guides said to get in touch with Mr. Callaghan, of the Finance Department. Mr. Callaghan told me that we would have to have an Act of Parliament passed to put those "plates" on the list of goods prohibited entry into Canada. He said that the matter could not be considered until the Budget is brought before the House and Tariff changes considered. On April 7 I had further conversation with Mr. Callaghan over the 'phone and sent him a copy of a letter received from Dr. Gullett telling of the progress of a similar Bill in the U.S. Government at Wash-

ington. This bill is designed to prohibit the transportation in interstate commerce of dentures constructed in violation of state dental laws. It has passed the House of Representatives and is now before the U.S. Senate for their consideration. Mr. Callaghan said that we could do nothing more till the Budget is brought down.

NATIONAL DENTAL HEALTH LEGISLATION

We had several telephone conversations with Dr. Heagerty, Deputy Minister of the Department of Pensions and Health, and accompanied Dr. Higgins when he interviewed Dr. Heagerty on November 20, 1941.

Our personal reaction to these conversations is that the Federal Department of Health wishes to have dentistry given the place in national health service which they think it deserves. The Department of Health however, is perhaps not as keen concerning the importance of dental health for the public as they should be and it is up to us to try to make them realize the paramount importance of mouth health in the national health scheme. This is being ably done by the Central Committee re Public Dental Health of the Canadian Dental Association.

PRIORITIES FOR DENTAL STEEL INSTRUMENTS AND BURS

On December 10 last Mr. H. P. Temple and Mr. Wm. McTavish, representing the Canadian Dental Trades Association, and myself, interviewed Mr. W. E. Uren, of the Priorities Office of the Department of Munition and Supply, re having a sufficient quantity of dental burs and steel instruments brought in from England to replace those caused by the shortage resulting from war conditions in U.S.A.

About the middle of March Mr. Amy,

of Mr. Uren's staff, 'phoned me that our application had been considered favourably and that we would be allowed 12,000 gross of British burs and \$12,000 worth of dental instruments. When I was in Toronto, March 18, I had conversations with Mr. McTavish and also with Mr. Lawrie, Secretary of the Dental Trade Association and they said they were satisfied with the amounts secured.

TIRE RATIONING

In February of this year Dr. Rooney asked me to see what could be done for dentists who require special consideration regarding the allotment of automobile tires because of unusual conditions in their practices.

Mr. A. H. Williams, Controller of Supplies for the Department of Munitions, appointed Mr. I. G. Needles to consider our requirements. Mr. Needles advised me that our application was considered carefully and if anything could be done we would be allowed tires on proof of need.

Signed: SYDNEY W. BRADLEY,
Chairman.

EDITOR'S NOTE:—Since this report was presented we have been advised through

Mr. Uren, Director General, Priorities Branch, Ottawa, that word has been received through the British Embassy at Washington that dental burs are specifically excluded from the list of articles which can be imported to Canada from Britain.

We understand that United States authorities object to the British manufacturers supplying burs to Canada while the United States manufacturers are supplying the British Government with burs under the Lease-Lend agreement.

As the United States government is calling up thousands of dentists for service in the armed forces large orders for burs have been given to supply these new recruits and this has made it difficult for the manufacturers in the U.S.A. to supply the Canadian market. However, the bright side of the picture is that the government has ordered the manufacturers to make 15 sizes of burs only instead of the 69 heretofore made; which is the same as increasing the plant capacity by about 400%. We understand also that several leading manufacturers are increasing the number of their machines by about 20%. With these changes it is hoped that the U.S.A. manufacturers will be able to supply the normal Canadian market.

18th Annual Fall Clinic

The Montreal Dental Club will hold its fourth wartime Fall Clinic on September 23-25, in the Mount Royal Hotel, Montreal. A full program of papers, clinics, and demonstrations has been arranged by the Committee and a cordial invitation is extended to all ethical practitioners to attend. The preliminary program will be available about September first, and anyone desiring the same is requested to communicate with Dr. M. L. Donigan, 1414 Drummond Street, Montreal, Canada.

Registration fee, including two luncheons.....Resident \$10.00
non-Resident \$ 5.00



Do not burn or destroy this publication. Sell it or give it to a salvage organization. It is needed for victory.



Report of the Committee on National Dental Progress*

IT IS the pleasure of this committee to report that all of the provincial dental legal bodies have now agreed to increase the annual grant to the Canadian Dental Association on the basis of four dollars per member per year beginning and for the year 1942. The objective set for our committee at the time of its establishment in April 1940 has, therefore, been attained, but a short history of the more important incidents in the development of this new arrangement will likely be of interest. Some additional duties which were later assigned to this committee are also to be reported.

The interim report of this committee, submitted on September 20, 1941, indicated that the legal bodies of six provinces had passed resolutions favouring increased financial support to the Canadian Dental Association. Since that time the efforts of the committee have been applied, in the main, to assisting in the completion of the educational campaign with the aim of receiving favourable resolutions from all provinces.

On November 22, 1941, the Council of the College of Dental Surgeons of British Columbia passed a resolution favouring increased support to the Canadian Dental Association for 1942 irrespective of the support pledged by the other provinces, provided all provinces pay the increased grant for 1943. The determination of the British Columbia Council to make the increased grant for 1942, irrespective of the action of the remaining provinces, was obviously a generous allowance for the possibility that

one or more of the provinces might not be able to provide the increased grant for 1942.

Mr. A. E. Rowlett, past-president of the British Dental Association, during an address to a group of Toronto dentists on November 21, 1941, presented views in such harmony with those of this committee that we urged the arrangement of his trip to the dental societies of Quebec and the Western provinces. Mr. Rowlett's inspiring addresses on the need of preparation for post-war conditions affecting dentistry undoubtedly assisted in the unification of the profession across Canada.

Due to some unavoidable delays the educational campaign in Quebec was considerably postponed but the Provincial Co-operating Committees zealously conducted a campaign which came to a successful conclusion on January 30, 1942, when the College of Dental Surgeons of the Province of Quebec passed a resolution to increase to \$4.00 per capita the annual grant to the Canadian Dental Association.

The exceptional efforts of the Alberta Board and Provincial Co-operating Committee to furnish the increased grant for 1942 deserve special mention. The Alberta Board was finally successful in securing an amendment to the dental act for this province which permitted the Board to increase the annual licentiate fee, and later, at a special meeting, to pledge increased support to the Canadian Dental Association for 1942. Nova Scotia, Ontario and Quebec had all passed resolutions agreeing to pay the

* Condensed from Report presented at the Delegates' Meeting of the C.D.A., Toronto, May, 1942.

increased grant when all other provinces did likewise and these resolutions automatically became effective for 1942 when the Board and Co-operating Committee of Alberta had brought their great effort to a successful conclusion.

The Committee on National Dental Progress was asked to assume the responsibility of submitting suggestions in respect to:

1. Housing of the headquarters staff.
2. Budget.
3. Men available for the position of full-time executive officers.

Sub-committees were appointed to study housing, qualifications of a full-time executive officer and budget. It was felt that the proposed budget which this committee submitted in 1940 might not be applicable. Because of the interrelation of these duties to the income and necessary disbursements at the present time, Dr. Blatchford, chairman of the Finance Committee, requested this committee to prepare a tentative budget for 1942-1943.

HOUSING:

The University of Toronto provides housing at a very nominal rental for the Canadian Medical Association, the Ontario Medical Association and the Academy of Medicine, Toronto, and some enquiries have been made concerning a similar arrangement for the Canadian Dental Association, but definite reply has not yet been received. It may be necessary to rent space in the usual way and for this expense an item of \$600.00 is shown in the tentative budget plan.

BUDGET:

The proposed budget submitted by this committee in 1940 was computed in the expectation that the Canadian Dental Association would receive four dollars per member per year which would have established an annual income of about

\$16,000.00. At the present time the majority of the legal bodies have expressed themselves as unfavourable to paying the increased grant for members in the armed forces. It may be recalled that our committee adopted the following resolution: "That this Committee recommend to the Board of Delegates that men on active service be given the privilege of membership in the Canadian Dental Association for the duration of the war without fee." As a result the anticipated income of the Association will be considerably reduced for the duration of the war.

Reduction of expected income and the apparent need for a large appropriation for the study of dental health legislation made necessary a revision of the budget submitted in 1940.

FULL-TIME EXECUTIVE OFFICER:

The sub-committee on qualifications of a full-time executive officer presented valuable suggestions to this committee. It is our pleasure to submit the names of men who are eminently capable of fulfilling the requirements of this very important position. Reported verbally.

ACKNOWLEDGMENTS:

It is a commonplace to state that the accomplishments of a committee may be largely credited to its secretary but in this case the statement is strikingly true. Dr. G. V. Fisk has served in an inspiring dynamic fashion which stimulated the whole of a very harmoniously co-operative committee.

The successful completion of this committee's assignment was in a very large measure the result of the splendid assistance received from the Provincial Co-operating Committees, the members of which were named in our Interim Report. They attended very efficiently to the great amount of detail work necessary in the

provinces where educational campaigns were conducted and we are very grateful for their co-operation.

The foresight which led to the establishment of this committee is to the credit of Lt.-Col. S. A. Moore. He devoted many hours to the assistance of the committee in the original phase of its activities.

Signed:

J. A. BOTHWELL

G. W. GRIEVE

D. W. GULLETT

E. W. PAUL

H. W. REID

E. VEITCH

C. H. M. WILLIAMS—*Chairman*

G. V. FISK—*Secretary*.

Report of Public Relations Committee*

AT THE last meeting of the Canadian Dental Association held in Toronto in May, 1940, the Public Relations Committee reported the preparations made for the observation throughout Canada of the centennial of dentistry. This program was completed as arranged, two of the provinces holding their centennial lunches at later dates, when their provincial bodies were meeting.

Appropriate acknowledgements and letters of thanks were sent to all those contributing to the success of these centennial observances.

I would like to mention the splendid gesture of the guest of honour, Dr. Arthur H. Merritt, President of the American Dental Association, who asked that his expense account be given to the Red Cross instead of forwarding it to him. This was arranged and carried out.

In June 1940 this committee Chairman in a communication to the President called attention to the possibility of the Canadian Dental Association assuming the responsibility of providing accommodation for the refugee children of the members of the British Dental Association. I believe this matter was given over to the Secretary for his attention.

Some provincial organizations acted independently in arranging for homes for

these children but the evacuation plan was discontinued and at present there is no indication of it being resumed.

The matter of consideration of rehabilitation for members of the C.D.C. after the war was also suggested as a matter for the consideration of the C.D.A. At the same time this committee Chairman also suggested that consideration should be given by the C.D.A. to providing dental treatment for the evacuee children who had arrived in Canada under the general evacuation plan.

No instructions were received at this time except the suggestion that the travelling Secretary of the C.D.H.C. might make valuable suggestions along this line; his constant contacts with provincial as well as Federal governments should be helpful. This matter apparently received the attention of the Executive and delegates during the summer and fall of 1940.

In January 1941 it was suggested by the Chairman of the Board that the Public Relations Committee take up the matter of dental care for evacuee children.

There was considerable delay in proceeding with this matter owing to some misunderstandings the responsibility for which I, as Chairman of the Public Rela-

* Report presented at Delegates' Meeting of the C.D.A., Toronto, May, 1942.

tions, must hold myself largely responsible.

This committee has communicated with each provincial association to ascertain:— 1. What arrangements, if any, had been made for providing dental treatment for evacuee children and to what extent it had proven satisfactory.

2. To what extent the enlistment of dentists had affected dental services available to civilian population.

3. The amount of illegal dental practice by unqualified men. The following provinces co-operated by returning the information requested.

1. BRITISH COLUMBIA:

The enlistment of dentists has not yet presented any serious problem to civilian services; also the infraction of the dentistry act by unqualified persons in B.C. is negligible.

2. NOVA SCOTIA:

The 150 British guest children are distributed rather evenly in urban areas with approximately 10 in rural communities. Children are receiving satisfactory dental care through foster parents.

About 16% of the dentists of Nova Scotia are reported to have enlisted, with the result that about ten towns, which formerly had dentists, are now without them. The situation may soon prove serious as enlistments continue.

There have been very few cases of practice of dentistry by unqualified men in N.S. but the Board appears to be apprehensive about the future in this regard.

3. MANITOBA:

There are about 160 evacuee children in Manitoba, 140 of whom are in Winnipeg. These children are wards of the Children's Aid Society with whom the dentists have arranged that service will be rendered to these children without cost.

The shortage of dentists in rural areas

is taken care of, at the present, by visits from neighbourhood dentists. In addition travelling clinics visit country school districts and supply dental services; about 4000 school children, in outlying districts, receive dental attention in this way each year.

In Manitoba there has been evidence that a number of dental mechanics use their laboratories as a cloak to cover illegal dental practice. Under the present act it appears to be difficult to discourage this practice.

4. SASKATCHEWAN:

In Saskatchewan 102 children were brought into the province under the Bureau of Child Protection Evacuation Scheme. Regina has 25; Saskatoon 17; and Moose Jaw 13; the remainder are scattered throughout the rural areas.

When evacuee children were brought into this province a dental examination was made for each child by the Regina Dental Society and the condition charted. The College of Dental Surgeons arranged for every child, under the plan, to receive dental care by the dentists of the Province, free of charge, for the duration of their stay.

The workers in the Bureau of Child Protection report that they have received all co-operation possible by the dentists of the Province.

In Saskatchewan, the enlistment of dentists has brought about considerable hardship on the civilian population. On one railroad there is no dentist between points 125 miles apart: this area had been served by three dentists.

It was pointed out that if the condition remains too long there might be legislation, of some sort, introduced in the province that might not be in the best interest of the dentists.

Saskatchewan reports no increase in the amount of illegal practice. This is being closely watched in the hope of avoiding it.

5. PRINCE EDWARD ISLAND:

There are 25 evacuee children in P.E.I.

No arrangement has been made by the P.E.I. Dental Association for their dental care. These children are all in good homes and receive the same health attention as other children in those homes. In some cases dentists are working without charge for these children and in others at a discount.

There are thirty dentists registered in P.E.I. and 6 enlistments or 20%. There is only one rural community reported as being inconvenienced by enlistments; these people now having to go 15 miles to the closest dentist.

In P.E.I. they report no illegal dental practice.

6. ALBERTA:

In Alberta there are 135 guest children, these, including both King's wards and those evacuated privately, are receiving all ordinary dental care by the members of the Alberta Dental Association free of charge. This plan was inaugurated July 1st, 1940 and is planned to continue for the duration. Recent reports show that the plan is working satisfactorily.

The situation regarding proper maintenance of civilian practice in Alberta is perhaps the most serious of any province. Out of a total of 251 licentiates in the province for 1940, 66 had enlisted up to October 1941. There are areas unserved now by dentists whose people have to travel up to 150 miles for dental care, although the larger centres have not yet been seriously affected.

In June 1941 the Alberta Dental Association formed a committee to organize travelling clinics to be operated by dentists in practice, in rotation. He would pay his own expenses and collect his own fees: preliminary work only has been done to date. A list of districts un-

served by dentists is kept by the Association and distributed to its members.

It is apparent that illegal practice is increasing in Alberta. Under a provision of the Public Health Act, mechanics are licensed to practise under protection of a dentist who wishes to register with him. This apparently leads to illegal practice by the mechanics.

There is a possibility of some mechanic introducing a private bill asking to be allowed to make dentures at will. It will, no doubt, be vigorously opposed.

7. ONTARIO:

There are 611 children in Ontario under the jurisdiction of the Children's Aid Society. These children are fairly evenly distributed throughout the Province, the larger centres accommodating the most.

The Ontario Dental Association took steps to provide homes for children of British dentists but the plan was discontinued before these children were evacuated.

There is no arrangement by the C.D.A. for dental care of evacuees but it is left to the individual dentist to make arrangements with the foster parents, although in some localities local dental associations have working plans for free dental care for evacuee children. In some cases dentists, with established contact in private schools where evacuee children are located, find rather a heavy burden in providing necessary care. On the whole these children seem to be adequately cared for.

In August 1941 there were 254 enlistments by dentists from Ontario or approximately 13%. The percentage enlistments vary in many sections with a result that many sections, as in other provinces, are without dentists. Some effort has been made by the R.C.D.S. to induce men to serve these districts but with very little success. Recent reports

show that many districts have become reconciled to the inconvenience and fewer complaints are being received.

The matter of illegal practice in Ontario is receiving the attention of the Board of the R.C.D.S. There is no apparent sharp increase at present but it is thought that this is probably due to the increased burden of practice on those who are left to look after civilians, consequently these cases are not being reported.

8. QUEBEC:

The Montreal Dental Club has arranged to direct evacuee children from England to private dental practitioners who have agreed to freely render their services to these children.

There were 75 enlistments of dentists reported in Quebec in August 1941.

9. NEW BRUNSWICK:

In August 1941 it was reported that 17 dentists in N.B. had enlisted up to that time.

The Chairman of the Public Relations has continued the study of Health Insurance. At the time of the last meeting of the C.D.A., in 1940, a report was being prepared on the trend of social legislation. This was discontinued as the Chairman found that this matter was well covered in the year books of the Canadian Life Insurance Officer's Association, copies of which have been secured for some years back.

A great deal of material has been accumulated by this committee on the subject of Health Insurance which the Chairman has always considered one of the main functions of this committee as it is the successor to the State Dentistry Committee. Some of this material has recently been loaned to interested parties in Ontario as it is the policy of the committee to co-operate, whenever possible, with

those who are working on this problem.

The chairman was delegated to represent the C.D.A. on the committee of the R.C.D.S. which is at present studying Health Insurance and has published several interesting pamphlets.

Contact has been maintained with the Canadian Medical Association in order to keep posted on its progress in dealing with studies of Health Insurance.

At the 1940 meeting of the C.D.A. the Chairman of the Public Relations Committee called attention to the possibility of Health Insurance legislation becoming a reality in the near future and urged that provincial committees be set up to study the problem and work with the Public Relations Committee in this study.

In Ontario this was done and a splendid piece of work is being accomplished.

Early in October it was learned that legislation of some type was contemplated by the Federal Dept.

A C.D.A. committee was eventually appointed with Dr. Higgins as acting Chairman to make a study of proposed Health Legislation. A full report of the work of this committee will be presented to this meeting by Dr. Higgins. The Chairman of the Public Relations Committee has been active on this Committee, and has continued to represent the C.D.A. on the Executive of the Canadian Dental Hygiene Council.

There has been one or two occasions for the Public Relations Committee to deal with articles appearing in the Public Press: one article which appeared in the Toronto Globe and Mail by Mr. J. V. McAree was much appreciated. The Chairman expressed his appreciation to Mr. McAree and obtained permission from the paper to have the article republished.

Signed: JOHN S. LAPP
Chairman.

Report of the Journal Committee*

THE most important matter affecting the future of the Journal in particular, and the Canadian Dental Association in general, is the amount of the appropriation which is to be placed in the budget for the publication of the Journal.

The need for adequate financial support has been well demonstrated over the past years. The rapid evolution of social legislation affecting dentistry has made it necessary that information upon the effect of changes in government rulings, made from time to time, be gathered and disseminated as soon as issued. The Journal is the official organ of this association, reaching all the dentists in the Dominion. Such matters affecting the profession as impending health legislation, Canadian Dental Corps affairs and post-war rehabilitation have required and will continue to require to an increasing degree the time of the editor and his staff.

These additional responsibilities together with the usual duties of an editor directing the publication of a scientific monthly journal demand that he spend about one half of the working time each day in the interests of the Journal. In addition to the time spent upon our Journal by the Editor-in-Chief, there is considerable extra work upon the part of Dr. T. R. Marshall, the Ontario Editor, who deals directly with the publishing house in certain details which develop frequently. Your Committee has seen fit to appoint Dr. Marshall Assistant Editor.

Owing to an accident last November, Dr. Thibaudeau, Editor of the French

Section, has been carrying on his duties under difficulties, but has continued to forward his material for that section promptly each month.

Dr. Bricker, British Columbia Editor, recently found it necessary to resign because of pressure from other duties. In accepting his resignation, your Committee wish to thank Dr. Bricker for his active interest in the Journal. At a meeting of the Committee held on Monday evening, upon Dr. Bricker's recommendation, Dr. H. M. Cline was appointed Editor for British Columbia.

Due to ill health, our capable Business Manager has found it necessary to ask to be relieved of his duties by the end of this year at the latest. Col. Moore's business ability and excellent judgment have been of inestimable value to this Association but particularly to the Journal Committee. Your Committee accepts Col. Moore's resignation with extreme reluctance but realizes that in the circumstances it has no alternative and therefore concurs with the recommendations of the Committee on National Dental Progress, which has already been presented to the Board of Delegates, that the duties of Business Manager of the Journal be undertaken by the full time Executive Officer. It is the hope of the Committee that Col. Moore will be able to continue his duties until the end of this year, to enable the executive officer to organize his office before undertaking the additional duty of Business Manager.

Signed:

A. FORTIER

C. H. M. WILLIAMS

G. V. FISK (*Chairman*)

* Condensed from Report presented at the Delegates' Meeting of the C.D.A., Toronto, May, 1942.

Report of the Business Manager of

THE JOURNAL OF THE CANADIAN DENTAL ASSOCIATION

LE JOURNAL DE L'ASSOCIATION DENTAIRE CANADIENNE*

LITTLE did I realize in 1934 when the Journal Committee was formed that eight years later I would continue to occupy the same position with the Committee functioning in practically the same manner. The starting of this publication might be called an experiment and I have often wondered how many of the members of the Board of Delegates at that time really thought that this experiment would be carried to a successful conclusion. I believe that the probationary period has passed and that under the able editorship of Dr. Garvin the Journal has secured for itself a recognized place among dental publications and if, for any reason, its publication were discontinued it would meet with the strong disapproval of the Profession of Dentistry in Canada. During the past year I have received hundreds of letters, some from Officers in the Dental Corps and others from dentists in private practice, speaking in complimentary terms of our publication and thanking the Journal Committee for its efforts in keeping them supplied with the current copies. Also I have received a few letters criticizing our efforts rather unkindly but which I have answered in a courteous manner trying to explain some of the problems with which the Committee and the Association are confronted.

It has been particularly difficult for me to prepare a report this year. I do not think it would be good judgment for me to present too much detail but you should receive the information necessary for you to be familiar with the present and past

position of the Journal. There has been a gradual increase in the number of copies of the Journal printed. This is desirable and is to be expected if progress is being made. The number of members in the profession has increased, resulting in an increased number of Journals being mailed to members of the Association. The number of complimentary and subscriber copies has decreased in 1941. This is due to a closer supervision of the complimentary list and the fact that at present our Journal is not being mailed to certain foreign countries in which previously there were subscribers.

There has been a slight annual decrease in the amount of advertising since 1937, but, in view of world conditions, I believe that we are very fortunate. The decrease of advertising in the Journal is a much smaller percentage than in other similar magazines and much less than in consumer publications. The advertising situation at the present time is much harder to control.

The gross advertising receipts are slightly less than last year but the difference is less than would be expected in relation to the amount of advertising used. This is likely due to the fact that some advertisers did not use enough space to come under the reduced rate.

The grant from the Canadian Dental Association in 1941, based on the rate of 25 cents per member per year, is slightly higher than in 1940. You will note that in 1939 the grant was \$1,334.65. This larger amount was due to the fact that in 1939 the Dental Board

* Condensed from Report presented at the Delegates' Meeting of the C.D.A., Toronto, May, 1942.

for the Province of Quebec made a special grant to the Journal Committee of over \$200.00. This amount is included in the total.

The publishing costs have remained fairly steady. The increase in 1937 was due to the fact that it was decided to use heavier paper in the Journal. In view of increased costs generally, it is somewhat surprising that this result has been obtained and I would say that it is in a large part due to the full co-operation I have received from the Editor who has always been most considerate with regard to financial expenditures.

The amount of commission paid to our publishers has steadily decreased. This is due to a reduced rate as well as a smaller amount of gross advertising receipts.

The agency commission has increased. The Journal Committee have no control over this expenditure. If the advertiser deals directly with the Journal Committee, there is no commission paid. If the advertiser deals with an agency, the agency commission is deducted from the charge made for the space used. It is the privilege of the advertisers to use an agency if they wish and more of our advertisers are adopting this procedure which results in an increased expenditure to the advertising agency.

I have no record of the postage paid in 1935. In 1937 the weight of the paper was increased which resulted in an increased amount of postage over 1936. It is interesting to observe the small variation in the amount of postage from year to year.

Undoubtedly, pictures add much to the attractiveness of the Journal and scientific articles, particularly, are more easily read and understood if well illustrated. I do not think the cost is large for our pub-

lication and I would again mention that the Editor has been most considerate. There has been an effort made by the Engravers to increase the cost of cuts but up to the present time this has been avoided. I hope that our present arrangement may continue.

The net profit has decreased annually since 1937 but the expenses have increased as well as certain other charges.

Up to the present the only shortage affecting the Journal has been material for the covers. In future, we will be unable to secure the same colours of cover as used in the past and possibly not the same type of paper. This fact was realized some time ago and we were able to purchase nearly enough cover material of different colours to last a year.

My business relations with the Consolidated Press who print our magazine have been most pleasant. Like other business firms, they are carrying on at some disadvantage due to the fact that they have lost many of their old employees but these conditions must be accepted under present circumstances. I believe that our advertisers appreciate the service we are trying to render them and that our Journal has their support and goodwill.

It is difficult to foretell the future but the past experience of the Journal Committee, particularly in 1940 and 1941, should be of some value. I believe that the publication of the Journal is past the experimental stage, and that it is recognized as being necessary to our profession and desired by its members. I think that the future of the Journal is very favourable. It should not depend upon voluntary assistance.

Signed: STEPHEN A. MOORE,
Business Manager of the Journal.

No man is big enough to be independent of others.—William Worrall Mayo.

Practice Management

What's Holding You Back?

by James Robinson, Chicago, Illinois

(Condensed from Jrl. of Mich. S. D. Society, June, 1942.)

PRACTICES are not built on golf courses, in churches, lodges, clubs. They are built at the side of the chair.

Any activity that you may employ in the meeting of people and holding social communion will not be the answer to the building of that practice. It will attract some of them to your chair, but if they are not handled with proper grace and strategy, certainly you will not have a healthy practice. Further, unless you establish a climate of sympathy and show an educated heart as well as fingers, you will not succeed.

We need now to encourage all of the dentists to tell a health story better than they ever told it before. Dentists never had a better opportunity to build the story of dentistry forever in the minds of the people. Now is the time because more people will be seeking dental care. You have been competing with vacuum sweepers, automobiles and electric refrigerators for years and you blamed that for the reason you weren't doing so well. You don't have that competition now—it is wiped out—and some of this money is going to drift into the dentists' pocket. People can't hold on to it and they will give some of it to the dentist. When they come in, it is your duty, regardless of how busy you are, to pause and offer the private counsel that properly exercises your degree of "doctor", which means "to teach". It is through the lack of exercise of your degree of "doctor" that you have failed to bring the story as it should be

brought to the people of this country—a nation that gave birth to dentistry as an organized profession.

Experiences prove that the dentist does not pause to teach, to erect his values, to justify his fees, to explain the contribution of dentistry to the social and business life of the people. Now you have a greater opportunity than ever before. Now is your chance to equip yourself to tell an interesting and attractive, crystal clear story that builds those values.

The industrialists, the owners, the proprietors of businesses, etc., must be told this message so that they might, in turn, go back and do something about it in their own shops and places of business. I am thoroughly convinced that this is the time to tell the story. There will be adjustments following this war which will be the making of severe hardships for those who haven't built properly, but only handled a large number of patients, and have not paused to do the teaching they are called upon to do and let the memory linger on with those patients.

The whole story of what dentistry may do for people is written around two things—cleanliness and balance.

When the mouth has been made immaculately clean, the dentist proceeds to bring the mouth to proper balance. Balance is achieved only through the most delicate engineering known to science. Restorations and appliances of various types are employed in this accomplishment. All of the physiological aspects

must be respected and maintained throughout the procedure. When cleanliness and balance are achieved, the patient lives longer, looks better and is much happier. There you have a brief on dentistry, its mission and its promise of achievement.

Little children should be taught that their mouths are lovely gardens and that each tooth is like a beautiful flower. The gardens must be kept well-groomed and the flowers must spring from good, rich soil. The garden must be nourished each day and the flowers allowed to remain as guardians of health and beauty. Teach them to sprinkle the flowers each day and turn them to the sunlight with a smile.

The personal equation has always been a tremendous factor in professional success.

If a professional man of all people lacks character, the practice will carry the most severe penalty of all.

"Showmanship." You will say, "I was afraid of that!" Well, a great deal of it is exaggerated, but a little touch of it is good. Showmanship as far as dentists are concerned means the setting in which he works. The reception room and his general setting; he could put a little dash of something there that would help, no doubt; the way he behaves and carries himself and injects himself. It is worth a little something, but it is very difficult to describe. I think I have written an explanation of it down.

Here is an explanation of character. "Distinctive qualities or traits, honesty, ethics. Character turns a cordial greeting into a friendship, converts a promise into a pact, makes the flimsy structure of the moment into an enduring edifice. Character is what one seeks in another. It is the priceless possession of an individual; still it only exists in the estimation of his friends and his associates."

Explanation of showmanship: "To

present, to show under favourable conditions, to enhance your personality, your ideas or commodity; a background for your presentation; helpful surroundings."

The combination of these personal attributes, namely, effort, ability, personality and character, plus ethical showmanship completes a picture. They all add up to increased earnings.

For the first time since 1929, you will have all the patients you can handle.

I would like to give you one of the answers to the principal question that is being asked all over the country. "My appointment book is filled for weeks. How am I going to tell people that I really want them in my practice but I can't see them? I am booked for one, two weeks in advance. What am I going to do?"

Any time that appointment book is solid, it is wrong. Any time that you book patients solidly, day after day, even one day in advance, you are wrong. You should leave a half hour, or even an hour depending on the type of practice you have, absolutely free in each day's program. That will always be the same half hour or hour, say from two until two-thirty or three, and your patients are advised that this time is free and if they are down town and wish to see you, that is when they can do so. It also permits you to absorb some of the time where you have found it necessary to extend an appointment in behalf of an individual, without disrupting your entire program for the day and upsetting even your disposition. Give yourself a chance to absorb some of the things that are happening in these practices now. Stop saying, "The next time you are down town, drop in at such a time and I will have a look" or "Drop in next week and I will polish it for you." You can't burnish a single thing in the world under 20 minutes, and it takes six or seven minutes to greet a patient and discharge him. Some men

are seeing 30 patients a day. It is difficult to even be courteous to that many. There is too much migration of patients in dental practices because of faulty handling, bad grace and lack of strategy. But, if you will leave yourself some vacant time every day and always at the same time, you will find some relief in your program.

These are times when we must seek the things that lift our hearts. It is not so much a matter of economics whereby you will make a great deal of money.

You are going to make some money. It is only a question of how you will spend it. Men are broke from spending, not from lack of earning. Now is the time for you to live within your means. Like the patients, you cannot buy all the luxuries which have become so necessary to us. Now is the time for you to become absolutely solvent, healthier, and stronger, and do it with great joy and satisfaction, and a true sense of achievement.

Office Care

THE average office needs going over and renovating at regular and frequent intervals. There is nothing much more stale than a stale dental office, with its last week's pungent odour of lysol permeating every room. Such an office gives the impression of being "run down at the heel" and of being neglected. And this comes very nearly being one of the cardinal sins of the members of our profession.

Blessed be the lady assistant who prods her employer into having his office "done over" the moment it is needed. It should be her function to see that the office is kept presentably tidy and attractive. She

can visualize the niceties that are needed, and detect the discrepancies much better than can the dentist himself. She should be the custodian of the "atmosphere" of the office and the general overseer of the office equipment. She can check up on the careless habits of the average practitioner, and institute a methodical way of doing things. She can suggest a myriad of improvements to the betterment of an office that would never occur to a man.

Incidentally, she may appropriately suggest that the dentist himself shall have his hair cut at suitable intervals, and his trousers periodically pressed.—*The late C. N. Johnson in Northwest Dentistry.*

Meaning of Success

IF YOU ask what makes for success in the race of practice I cannot tell you. It is not knowledge or manners, for one may achieve a large practice without either of these. The power of inspiring confidence is possibly the one thing needful, but I really don't know. Everything depends on what one means by success. Some estimate it in terms of money and it is foolish to say that this does not count; some

think of honours of one sort or another, but these are of little value unless bestowed by one's fellow competitors. Let us agree, that so far as practice is concerned, that man has succeeded who has gained both the affection of his patients and the esteem of his colleagues.—Hutchinson, Robert, *The Medical Race. Lancet*, Oct. 8, 1938, Via *J.A.M.A.*, 113:2009 (Nov. 25), 1939, per *Bul. Chi. D. Soc.*

"Wisdom is knowing what to do next; Skill is knowing how to do it; and Virtue is doing it."—D. S. Jordan.

The Forum

• BROKEN NEEDLES IN DENTAL PRACTICE*

by WILLIAM I. OGUS, D.D.S., Washington, D.C.

THE advent of local anaesthesia in dental practice has added other hazards to our surgical problems—breaking of the needle during injections; subsequent problem of its location; and the operation for its removal.

Considering the fact that in routine dental practice thousands of injections are made daily, the number of needles broken is few. With the present improved teaching methods in dental schools and the many opportunities for further study, it is anticipated that the number will be greatly reduced.

An extensive study of broken-needle cases reveals the following as the most frequent causes:

1. The needle was not kept in a straight line with the syringe during the injection.
2. Needle used was of too small a gauge.
3. Needle was inserted either above or below the normal line for injection.
4. Needle was defective.
5. Patient in some way moved or interfered with operation.

Correction of the above faults would eliminate most of the possibilities of broken needles.

When confronted with the unhappy situation of a broken needle during a dental operation, it is important to avoid any excitement. An excited and nervous operator upsets his own mental state, limits his possibilities of recovering the needle, and may subject the patient to a

series of fruitless exploratory operations as well as nervous exhaustion. The operator has a ticklish job ahead of him, but it is not impossible if approached with confidence. However, in general clinic practice, the recovery of broken needles should be the sole responsibility of the oral surgeon.

The recovery of a short needle, broken in local injection, is not a difficult problem and can be located by the aid of a roentgenogram. To assist in its location, another needle is inserted in the soft tissue close to the broken one. The hub of the localizing needle will identify itself in the roentgenogram which is made with both needles in position (Fig. 1).



Figure 1

Roentgenogram of broken needle in upper edentulous jaw showing diagnostic needle (with bulb) in close proximity.

The broken needle is usually found in the tissue close to the bone.

The recovery of a long needle, broken when making a mandibular injection, is one of the most difficult operations in dental surgery. Its recovery requires a thorough knowledge of the anatomy of the part, good surgical judgment, practice, and perseverance. An excited oper-

*Reprinted from U.S.A. Army Dental Bulletin and Dental Digest with permission of the office of the Surgeon General, War Department, Washington, D.C.

ator had best turn the problem over to a calm and experienced oral surgeon.

In cases where the author has been called into consultation, an attempt having already been made, the tissues were found to be badly mutilated, the position of the needle changed, and, at times, broken into many parts. Unnecessary complications involving infection, trismus, injury to nerve, and shock to the patients were encountered.

Precautions are immediately necessary before any attempt is made to remove a needle which has been broken while making a mandibular injection. First—by means of cotton rolls, gauze packets, or a roll of bandage, the patient should be prevented from closing the mouth, as contraction of the muscles involved will cause the needle to move deeper into the tissue. Several good roentgenograms should be taken. One lateral plate and an anteroposterior view are necessary.

Immediately preceding the operation, an injection is made into the lingual tissue to control haemorrhage. A mandibular block injection is then made. The needle should not be withdrawn, but the syringe should be detached, the needle being left in place. A lateral roentgenogram is then made showing the relation of the broken needle to the serviceable one (Fig. 2). The latter should not be removed until the roentgenogram has been developed and studied.

REMOVAL OF BROKEN NEEDLE

Having carefully estimated the location of the broken needle, a vertical incision is made in the area, approximately over the centre of the needle. The incision should extend from one-half inch above to one-half inch below the broken needle (Fig. 3, A and B). The margins of the incision are retracted and the area containing the broken needle is exposed. It is important to remember that in practically all mandibles the actual distance from the internal oblique line to the



Figure 2

Roentgenogram showing diagnostic needle in place for locating needle broken in a mandibular injection.

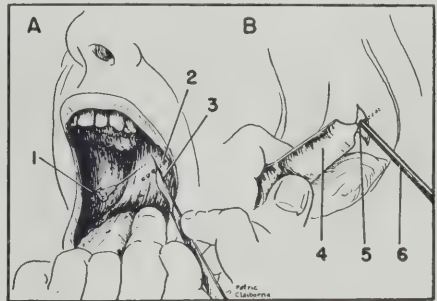


Figure 3

A—1, Diagnostic needle (with hub) inserted for locating broken needle; 2, broken needle in tissues; 3, right angle incision extending approximately a half inch above to one-half inch below the broken needle; B, 4, retractor; 5, broken needle; 6, hemostat forceps grasping broken needle.

sulcus is only half an inch.

The needle is first sought in contact with the inner surface of the ramus, gradually working toward the lingual. When the explorer touches the needle fragment, it provides a distinct metallic feeling. The broken piece may then be seized gently with a hemostat and removed. Care should be exercised at this point to avoid breaking the needle into smaller pieces.

When the needle has been removed, the incision is closed with one or two black silk sutures which should be removed at the end of forty-eight hours. Cold packs applied to the outside of the face and neck will control swelling. A mild antiseptic gargle may be employed. 1832 Eye Street, N.W.

• DENTO-LEGAL

Edited by NATHAN STEIN, D.D.S., LL.D.

THE validity of statutes prohibiting members of the dental profession from advertising for patrons in any form has been questioned frequently, but in every such instance the constitutionality of the statute has been upheld.

It was conceded, said a Court of Appeals, in a nearby jurisdiction, that the profession of dentistry and its practice are subject to the police power of the state and that the exercise of that power must be reasonable. Therefore, the only question before the court was whether or not the provision of the dental practice act in question, which was enacted under the police power, reasonably affected or promoted public health, morals, safety or general welfare. In the opinion of the court it did.

All dentists, as well as physicians and members of other professions, are not of equal capacity and the selection of the particular professional man to treat or represent the individual may, under the police power of the state, be regulated by considerations other than those purely economical. Persons of modest financial means and persons suffering from bodily ills are frequently not in a position to judge competently between the ability of different practitioners.

Clearly, it was within the province of the exercise of the police power for the legislature to forbid any attempt to influence the public generally in the selection of a dentist through the medium of advertisements of credit and credit terms.

The court was unable to differentiate between the damaging effects of advertising through paid agents and advertising by any other means through which patients, who perhaps would not have come but for the advertisement, are drawn to the office of the advertiser. While the court was unable to find a prior court decision involving a statute which specifically prohibited "advertisement of credit and terms of credit," in its judgment the same principles of law announced in the cases relating to prohibition of advertising in general by professional persons were applicable to the instant case, because "advertising credit or terms of credit" is nothing more or less than an effort by which the practitioner seeks to bring patrons to his office through the advertised inducement of credit, on enticing and satisfactory terms.

The whole structure of the law in upholding legislation regulating the practice of members of any branch of the medical profession is based on the theory that a practitioner should not engage in any conduct smacking of quackery but should let his work prove and establish his worth, instead of "blowing his own horn" in an effort to bring about that establishment. Patients should seek the physician or dentist because of his ability, and not the physician or dentist obtain patients through the gullibility of patients. The purpose of the legislature in enacting the provision in question was, in effect, to prevent undue solicitation by dentists based on a financial appeal and to maintain a proper dignity and standard of professional practice in dentistry. These were clearly matters looking to the promotion of public health and general welfare. The authority so exercised by the legislature was the quintessence of police power, and no occasion speaks louder for its exercise and application than the proper regulation of those engaged in the delicate task of tinkering with the human body.—*N.Y. Jour. of D.*



PRINCE EDWARD ISLAND



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Editor—M. H. GARVIN, Winnipeg

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MANITOBA



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BRITISH COLUMBIA



H. M. Cline, Vancouver

Present Day Dental Practice

Mr. James Robinson, of Chicago, in an address entitled, "What's Holding You Back", presented before the Michigan State Dental Society, and which appears in condensed form, in this issue of the Journal, quoted a story told by Mr. Irving Cobb upon visiting his home down in Paducah. Standing on the curb at high noon, watching the parade of people, he noticed a blind man coming toward him with a halting step, the faltering stick, the inevitable cup, the dark glasses, and a sign around his neck saying simply, "I am blind." Very few persons paid any attention to this. But, a little while later, another blind man came toward him and his attention was drawn because of the fact that people were actually pausing and putting coins in the cup. He examined him more closely and he noticed in exactly the same fashion—the same halting step, the faltering stick, the cup, the glasses, and the sign—except that there was a difference in the sign. Instead of saying simply, "I am blind" it said, "It is springtime, and I am blind." How terrible to be blind, but think of the tragedy of being blind in the spring of the year was the suggestion of those words.

Yes, words are filled with magic, and we as dentists need to watch our

speech as never before, if we wish to build for the future. There was a time when the right use of words, and office procedure, had to do with building up of a practice, in encouraging patients to have necessary dental work undertaken, in attracting new patients and in holding old ones. Many dentists were disappointed in their practices due, in part, to their personality which could have been changed; due to poor equipment which should have been replaced; due to a negative approach to their patients; due to accepting, at face value, a patient's statement that times were bad even though this same patient, the next month, proceeded to buy a new car or take a trip abroad.

Now conditions have changed; the dentists who are still in civilian practice are very busy, are working long hours, are turning patients away, are fearful of the effects on their health, and many do not know just what to do about it. Many things can be done and some of those things will be found in Robinson's article to which reference has already been made.

I agree with this writer that to book patients solidly even one day in advance is a mistake. He suggests that a half hour or an hour should be kept at the same time each day for emergency work and that patients should know of this arrangement and plan to drop in at that time. This is a splendid idea but in a city practice where appointments are largely made by telephone the writer has found it much more advantageous to reserve this time without the patient's knowledge, and not necessarily at the same time each day, and follow the practice of making short appointments in this special time, rather than have patients just drop in. If a good and loyal patient has a toothache he cannot wait several days to have it relieved.

As Robinson further states, "Now is the time to tell a health story better than it was ever told before: now is the time to justify our fees, to explain the contribution of dentistry to the social and business life of the people: now is the time to teach little children that their mouths are lovely gardens and that each tooth is a beautiful flower; that gardens must be well-groomed and the flowers must spring from good, rich soil. Teach them to sprinkle the flowers each day and turn them to the sunlight with a smile."

Now is the time to re-decorate and re-furnish the office; add the extra operating room if possible; secure an assistant if one is not already employed; secure at least two or more assistants if one has a very busy practice. Do no laboratory work that can be done by another if that other is available in these strenuous times. By all means keep poised. Under no circumstances appear irritated or upset. Above all follow a studied plan that one's health may be protected, if a true sense of achievement is to be experienced.

Take a vacation occasionally. Patients think you are either a tightwad or a failure if you never take any time off, and sometimes are pleased to find you are not in the office.

Give the impression you are the kind of fellow your patient would like to be.—C. H. Puterbaugh, in Oral Hygiene.

By exercise I do not mean the stereotyped and often excessive physical contortions you will find in these majestically illustrated books on physical-culture exercise, which usually do more harm than good. Nor have I faith in the regimental exercises which the Government seems to think the answer to our national unfitness . . . I have known cases of men who permanently injured themselves by taking up physical jerks which they were absolutely unfitted to perform.

By exercise I mean mild and graduated exercise, rational and natural exercise, and, above all, exercise in the fresh air. Walking, for instance, is the most admirable answer to the question.—Dr. A. J. Cronin in the "Star".

DENTAL CORPS NEWS

Lieut-Colonel Gordon D. Leggett

Lieut.-Colonel Leggett was born at Newboro, Ontario, of United Empire Loyalist stock and at the age of 34 is the youngest Lt.-Col. in the Canadian Dental Corps. He was graduated from the Dental Faculty, University of Toronto in 1931.

He served in the ranks of the 3rd Battalion, Toronto Regiment, University of Toronto contingent, Canadian Officers Training Corps and in 1930 received a commission in the Toronto Scottish Regiment. In 1932 he was captain of the team which won the General Sir Arthur Currie Trophy and the Service Rifle Championship of Canada. In 1933 and 1934 the machine gun platoon which he commanded won the Vicker's M. E. Championship of M. D. No. 2 and were also successful in winning the Canadian Championship.

By 1939 he had qualified in Infantry, Machine Gunnery and Artillery, taking the long course at the Canadian Small Arms School.

Among his souvenirs are to be found the Lord Strathcona Gold Medal, the Lieut.-Governor's Bronze Medal, the Delury Medal, the Dominion Marksman Gold Medal and Bar, the University of Toronto Rifle Assoc. Gold Medal, five Ontario Rifle Assoc. silver medallions and various shields awarded as individual trophies for team matches.

When hostilities commenced Lt.-Col. Leggett was serving as a Lieut. with the Toronto Scottish Regiment but was transferred to the C.D.C. with the rank of Captain. Since then he has served on the dental staff of M. D. No. 2, the

Air Training Command, R.C.A.F., C.D.C. Headquarters at Ottawa, and is now O. C. No. 10 Dental Company.

Prior to the outbreak of hostilities Lt.-Col. Leggett practised his profession in Toronto where his wife and two boys are now residing. He is a member of Grenville Lodge A.F. and A.M. and the Toronto Academy of Dentistry. His hobbies are rose gardening and speed boating.





Photo by Blank and Stoller Ltd.

Major L. F. McRae

Major L. F. McRae, who has recently been promoted from Captain, was graduated from McGill University in 1928. Major McRae was commissioned in the Canadian Dental Corps in October, 1939. He went overseas with No. 1 Coy., C.D.C., and was reposted to No. 24 Coy. shortly after his return in October 1940.

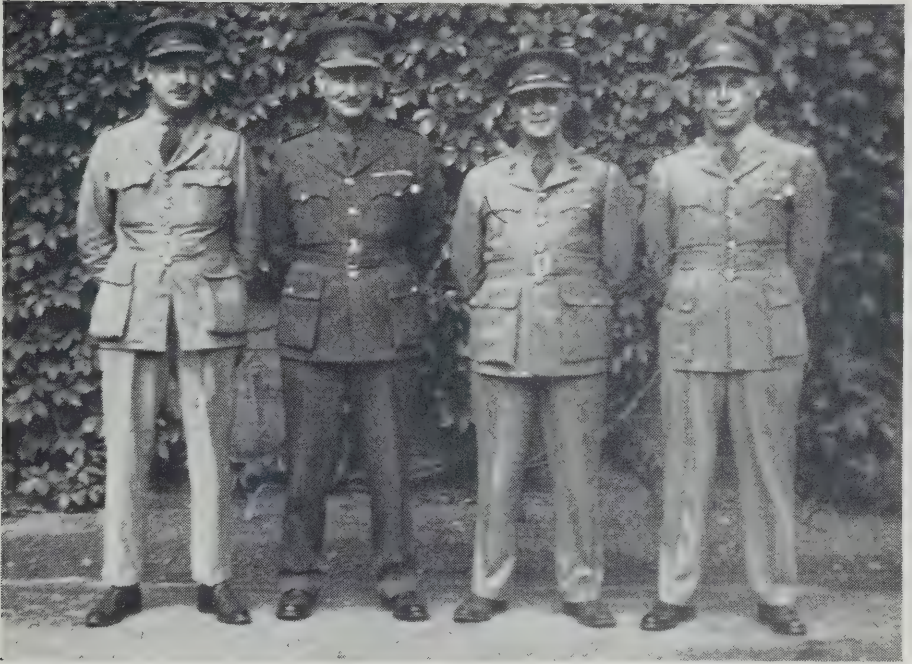
Major McRae was formerly on the staff of the Montreal General Hospital as Demonstrator in Operative Dentistry and also served in the same capacity on the Teaching Staff at McGill University.



2nd Lieut. F. C. Elliott

2nd Lieut. F. C. Elliott, who has recently received his commission in the Canadian Dental Corps, has been appointed Acting Adjutant for No. 21 Coy., C.D.C.

Lieut. Elliott served in the last war and enlisted as a private in 1939.



FOUR LIEUT.-COLONELS SERVING WITH CANADIAN DENTAL CORPS

In this picture is shown, reading from left to right, Lieut.-Colonel C. B. Climo, D.C.M., E.D.; Lieut.-Colonel E. M. Wansbrough, M.M.; Lieut.-Colonel D. S. Coons, M.M., E.D.; Lieut.-Colonel R. H. McDougall, M.M.

All four have been attached to the R.C.A.F. for duty, one as Staff Officer of Dental Service (Air) and three as Command Dental Officers. All served in the ranks in the last war. All have been awarded military decorations while serving in the ranks. All were graduated in the class of '23—one from Dalhousie and the other three from the University of Toronto. All members in this group carried on private practice in communities extending from Victoria to Halifax.

NEWS FROM THE PROVINCES

ONTARIO:

Faculty of Dentistry, University of Toronto

Dean Mason announces the appointment of Thomas Cowling, M.A.McM., D.D.S., B.Paed. of the Faculty staff as Assistant Dean. Dr. Cowling holds his Master of Arts from McMaster University and B.Paed., University of Toronto as well as his D.D.S. He joined the staff of the Dental Faculty in 1912 and since that time has been in charge of the Department of Metallurgy and later, that of Dental Technology as well. He is a member of the University Senate and a member of the Asso-

ciation of Dental Research (Canadian Division). He is editor of Oral Health and associate editor of the Journal of Dental Education.

In his new duties Dr. Cowling will retain his professorship of Dental Technology and Mineralogy.

Accelerated Course

The accelerated dental course for second, third, fourth and fifth year students of the Faculty of Dentistry, University of Toronto, commences August 24. The term of first year students opens on September 23. Registration for first year is September 22.

Technician's Course

The second dental technician's course conducted for the Canadian Dental Corps in the Dental Faculty of the University of Toronto, has been completed. One year ago a similar class concluded the course of instruction and the members were posted to dental clinics all over Canada.

The new class, already on its way to the new school of practical experience, had a membership of 60 men. Every one of them had fine academic qualifications and the group as a whole were splendid fellows, hardworking, enthusiastic and possessed a fine spirit.

On August 18 a class dinner was arranged by the men. All members of the instruction staff were invited with Dean Mason, Lt. Col. Ferguson, D.D.O., M.D. No. 2 and Major Sterling, Acting Command Dental Officer, No. 36 Company. Sergeant Jimmy McBride acted as toastmaster and during the evening short toasts were presented by Dean Mason, Lt. Col. Ferguson, Major Sterling, Pte. Jack Lamothe and Dr. Sydney Woollatt, Dr. R. J. Godfrey and Corp. Bill Geggie.

Perhaps Dr. Godfrey was closer to the class than anyone else as he was in charge. When he rose to speak the members left no doubt as to his popularity. He reminded the class that instruction in the classroom was about finished but their education would continue for life. "In the study of anatomy you learn a lot about bones. There are three very important ones that have to do with character," said Dr. Godfrey, "The Wishbone—wishing and hoping does not get one very far; the Jaw Bone—forever talking without action does little more; the Back Bone is what all of us need, a good strong one." In conclusion he wished the members of the class God speed with the following lines from Kipling—

"No easy hopes shall bring us to our goal
But iron sacrifice of body, mind and soul."

As a token of appreciation, Toastmaster McBride presented Dr. Godfrey with an engraved silver cigarette case on behalf of the boys.

The following instructors assisted with the course—Drs. I. H. Ante, J. A. Bothwell, R. G. Ellis, K. R. Harris, W. S. Jackson, T. O. Jones, T. R. Marshall, Frank Martin, H. Mercer, J. B. Pepper, J. G. Perkin, T. N. Scott, G. W. Spinks, R. S. Woollatt.

City of Toronto Extends Dental Service

Beginning with the fall term students in Toronto secondary schools will receive a dental examination as part of the health services extended by the Board of Health in co-operation with the Board of Education. This should do much to preserve the teeth of these young people as it is generally recognized that ignorance of the presence of dental defects is very often responsible for deplorable dental conditions in late teens and early twenties. When each student receives a card indicating his defective teeth it is expected he will have these defects corrected in most instances.

Cost of Living Bonus

Your attention is directed to the fact that the Dominion Bureau of Statistics has reported an increase of 2.4 points in the cost of living index.

The bonus payable as a result in the 2.4 rise in the index is now compulsory, and must be paid by all employers. Dentists will be required to pay the bonus to nurses employed in their offices. The following part of the order will apply in the vast majority of cases as far as members of the profession are concerned:

Section 48 (iii) (b). "One per cent of their basic weekly wage rates for male employees under twenty-one years of age and female workers employed at basic wage rates of less than twenty-five dollars per week."

For example,—A nurse whose basic wage is twenty dollars per week will receive a cost of living bonus of 20 times 2.4, or forty-eight cents per week in addition to the bonus on the basic wage, already being received, if any.

The cost of living bonus is to be paid for the first payroll period beginning on or after August 15, 1942. If employees are paid once a week the bonus payment is to be made on August 22: if paid twice a month the payment is due on August 31: If paid monthly the payment becomes due September 30.

The cost of living bonuses are subject to the National Defence Tax and Unemployment Insurance contributions.

Members of the profession are reminded that the basic wage rate is that which was being paid on November 15th, 1941, and no employer shall decrease the basic wage paid by him on that date; nor may he increase the

basic wage except on written permission of the National War Labour Board.

Correspondence respecting these matters should be addressed to:

Regional War Labour Board for Province,
Parliament Buildings,
Provincial Capital.

Severe penalties are provided in the order for not making the payment.

QUEBEC:

G. B. Scores Hole in One

Dr. J. Neilson Blacklock, known to our foursome as the Great Blacklock, scored a hole in one on the 11th hole of the beautiful Kanawaki Golf Club on August 5. He was playing at the time with Dr. John Common, his partner, and Dean A. L. Walsh and Dr. Earl Laurin. I am not at all sure of how and who gave him the title of "G.B." but I believe that it came about due to his great putting ability plus his straight drives down the fairways. At one time he was better known as "Down the Middle Blacklock" but we think that he prefers the newer title, "The Great Blacklock." We must admit that he excels in other fields of sport. He quite amazed me last fall with his accuracy with his rifle. Last spring he even surpassed his golfing and shooting ability by landing an 8-lb. grey trout on a 4 oz. rod. In 1940 he and three other gentlemen came back from Ottawa with the famous Governor General's Medal which brought glory to himself and his Club, Royal Montreal Curling Club. I could go on mentioning many more of his achievements but time will not permit.

The golf hole we were playing at the time was No. 11. G. B. used his No. 6 iron and with perfect accuracy, timing and aim he negotiated the 135 yards in a perfect shot and score. We were not surprised although somewhat excited. With his iron game almost perfect he has been known to have flirted with the said 11th hole many times before but as the old saying goes, "If you play with fire too often one is sure to get burned." Well, the inevitable happened. The members of this foursome began to play golf together way back in 1925. We have played golf together ever since. We decided at that time that every Wednesday afternoon would be reserved for this purpose. Many a battle has taken place with much kidding. The time, money and

effort have been repaid many times over. It has been an excellent health insurance and fine companionship. Already we are able to speak of fond memories. We hope that Hitler and his gang will soon be beaten so that we and others who love the open air may be permitted at least one afternoon weekly. This gives body and soul a chance to relax so that the more important duty to our profession and our personal practices will benefit thereby.—
E. L.

ALBERTA:

Dental School

It is satisfying to note that under Dr. Hamilton's direction, the following definite steps have been taken to improve considerably the Dental School of the University of Alberta.

1. A special grant of one thousand dollars from the University has made possible a definite first step towards modernizing the dental equipment. This very inadequate sum should be followed by larger amounts.

2. The Alberta Dental Association has made a gift of one hundred dollars for the purchase of books for the dental library. There is also a yearly grant of seventy-five dollars for this purpose available from the University.

The Library committee should lay out a definite five year plan to accumulate a complete set of reference books. When normal sessions of the school return, a scheme should be developed to make these books available on loan to the members of the Alberta Association.

3. The Kellogg Foundation has generously offered widespread grants to the Universities of Canada and the United States to help students finance during the accelerated courses. Five thousand dollars has been granted the dental school, which becomes a revolving fund to be loaned as required to the students, with or without minimum interest. As these loans are repaid after graduation, the money is again available to succeeding classes.

This is an important beginning of a way to make University training selective on the basis of ability and not financial backing.

4. Additions to the teaching staff have improved the academic training:

W. P. Calhoun, Lecturer in Dental Anatomy and Operative Dentistry. R. R. McIntyre, Lecturer in Orthodontia. L. C. Ward, Lecturer in Pathology and Radiology. F. S. Colman, Demonstrator in Prosthetic Dentistry.

G. Y. Barnett, Demonstrator in Prosthetic Dentistry. G. D. Sutherland, Demonstrator in Orthodontia. R. A. Rooney, Demonstrator in Operative Dentistry. C. D. Husband, Honorary lecturer in Local Anaesthesia.

It is to be noted that for the benefit of the school Dr. McIntyre of Calgary has accepted the appointment to teach four days each month at considerable financial sacrifice.—J. W. C.

Board of Directors of the Alberta Dental Association

Dr. C. D. Husband, President. Dr. Hector MacLean, Vice-President. Dr. R. A. Rooney, Registrar and representative to the C.D.A. Dr. H. L. Freeland, Representative to the D.D.C. Dr. R. R. McIntyre. Dr. W. F. Keith. Dr. Gordon Miller.

GENERAL NEWS

Reaction of Public to Health Insurance Proposals

- (1) Fortune Survey as reported in issue of July, 1942.

Question: To provide which of the following things do you think the federal government should and should not collect enough taxes after the war?

	<i>Should</i>	<i>Should not</i>	<i>Don't know</i>
Medical care for everyone who needs it.....	74.3%	21.0%	4.7%
An old age pension for every citizen over 65.....	73.8%	21.7%	4.5%
Jobs for everyone who is able and willing to work but cannot get a job in private employment	67.7%	25. %	7.1%
Compensation for everyone unable to find work until he can find work.....	57.8%	34.4%	7.8%

On the first three propositions there is not a single dissenting majority in any income or occupational group or section of the country (U.S.A.).

- (2) The result of the "Gallup Poll" released by the Canadian Institute of Public Opinion on April 8th, 1942, states that, "between seven and eight out of every ten Canadians are in favour of a National Health Plan for medical and hospital care, sponsored by the Government.

One of the questions used in this sur-

vey was worded as follows: "If the Government should start a National Health Plan, would you be willing to pay a small part of your (or your family's) income every month so that you and your family would receive medical and hospital care whenever you needed it?" This question was put to all types of Canadians, men and women, rich and poor, from coast to coast. The result of the poll was:

Would be willing.....	75%
Would not be willing.....	18%
Undecided	7%

This method of obtaining information has been proven, in the past, to be fairly accurate. Such indications possess tremendous political significance and have great influence upon members of parliament undoubtedly.

- (3) The following statement is not made with any accurate foundation but the writer has now heard it stated upon more than one occasion by those who should know, that a poll of the present federal house shows over two-thirds of the members in favour of a health insurance measure.

C.D.A. Committee on Federal Health Insurance.

Incorporation of C.D.A.

The Bill before our Federal Parliament, to incorporate the Canadian Dental Association has been passed, and the association is now an incorporated body.

IN MEMORIAM

R. I. Robertson, of St. John, New Brunswick, died July 25. He served in the Dental Corps in the last war and went overseas with this unit.

He practised his profession for many years

in St. John until his retirement several years ago. He was a member of Trinity church.

Dr. Robertson is survived by two daughters and three sisters.

... SECTION FRANÇAISE ...

Comité de Rédaction

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REDACTEUR

ALCIDE THIBAudeau, D.D.S., A.I.D.O.

516 est, rue Sherbrooke, Montréal, Québec

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La dentisterie d'Etat s'annonce pour nous

*Conséquence inéluctable des profondes erreurs
dans notre régime économique.*

par PHILIPPE HAMEL, B.S., D.D.S., Québec, P.Q.

Les Brevets et la Guerre

(suite)

LE MAGNESIUM⁽⁴⁰⁾—Voyons encore les méfaits de nos brevets.

Le magnésium, métal un tiers plus léger que l'aluminium, a joué un grand rôle dans les avionneries allemandes. Sur ce continent, l'Aluminum Company of America, contrôlée par les intérêts Mellon, forma un cartel, en 1931, avec une entreprise allemande: *I. G. Farbenindustrie*, pour la fusion de brevets, pour le contrôle de la production et des prix du magnésium.

Elle permit à une seule firme aux Etats-Unis, la "DOW CHEMICAL" de fabriquer du magnésium. Cette dernière entreprise, jusqu'en 1940, ne fabriquait que 2,500 tonnes, par année, de ce métal.

Le prix du magnésium a été tenu aux environs de .30c la livre, quand l'aluminium se vendait .20c la livre, et l'acier, .011½c. Cette fixation de prix limita la production du magnésium et favorisa l'aluminium.

A cause de ce cartel, la production du magnésium a été presque nulle sur ce

(40) Final Report & Recommendations of the Temporary National Economic Committee, 1941, p. 209.

continent, alors qu'en Allemagne, on utilisait largement ce métal pour la construction d'avions à la fois légers et résistants. N'oublions pas que dans un bombardier, il entre quelque 16,000 livres d'aluminium. Si vous remplacez cet aluminium par du magnésium, vous allégez le poids de l'avion, ce qui permet le transport de plus de bombes explosives ou incendiaires.

Le magnésium est aussi utilisé pour l'enveloppe des bombes aériennes.

Au début de la guerre, grande disette de magnésium pour nous. Impossible de rivaliser avec l'avionnerie allemande, sans produire abondamment de ce métal. La cupidité et les brevets de l'Aluminum Company of America sont une des causes importantes de cet état d'infériorité.

Sur ce continent, tout a été à construire. Les privilèges des brevets sont responsables de défaites militaires et n'ont pas avantage les inventeurs.

L'ALUMINIUM—Pour l'avionnerie, nous sommes à l'entière merci de l'Aluminum Company of America. Elle a éliminé tous les concurrents non seulement pour le magnésium, mais aussi pour l'aluminium. Un exemple:

En 1920, M. James Buchanan Duke⁽⁴¹⁾ Président de l'American Tobacco Company, avait acquis une chute sur la rivière Saguenay, province de Québec, au prix de \$1,000,000, pour la fabrication de l'aluminium.

L'Aluminum Company of America racheta cette chute de M. Duke, au prix de \$25,000,000, pour l'empêcher d'exécuter son plan.

L'Aluminum Company of America, par son cartel avec des compagnies allemandes, par la fusion de ses brevets avec des puissances étrangères, par l'élimination systématique de toute industrie nouvelle pour la fabrication de l'aluminium, a nui grandement à la production de guerre sur ce continent.

Aujourd'hui, notre production n'est pas aussi économique, ni aussi intensive que celle de l'Allemagne. Il nous manque actuellement 600 millions de livres d'aluminium par année⁽⁴²⁾. C'est sérieux. Nous n'avons pas fait montre de sagesse en laissant reposer nos chances de victoire sur une seule industrie.

Les leaders d'après-guerre mettront-ils ce monopole à la raison, afin que des situations aussi inquiétantes ne se répètent pas?

Pour atténuer le rôle néfaste de l'Aluminum Company of America, d'aucuns mentionneront qu'un juge CAFFEY, aux Etats-Unis, a rendu récemment un jugement déclarant que l'Aluminum Company of America n'était pas un monopole. Un jugement ne prouve rien contre les faits. — Cette entreprise produit tout l'aluminium vierge sur le continent. Si le mot "monopole" a une signification, il est difficile de ne pas l'appliquer au commerce de l'Aluminum Company of America. Devant les faits, les opinions perdent de leur importance, même si elles viennent de juges bien intentionnés. Non seulement l'Alcoa est un monopole pour la fabrication de l'aluminium, mais elle en est un aussi pour la fabrication du magnésium. Elle vient même d'être condamnée à \$140,000, d'amende, le 19 avril 1942, pour avoir—avec ses filiales et des intérêts allemands—monopolisé la fabrication du magnésium.

L'ordre nouveau demande que de telles puissances soient anéanties. L'Etat seul peut accomplir cette tâche, sans désordre. S'il y renonce, le peuple, un jour, assumera cette responsabilité. Lui, pour nous guérir d'un mal, nous en imposera peut-être un pire.

(41) Final Report & Recommendations of the Temporary National Economic Committee (1941), Washington, p. 228.

(42) Investigation of the National Defense Program, Washington (1942), Report no. 480, part 5, p. 15.

BERYLLIUM⁽⁴³⁾ — Peu de gens connaissent l'existence du beryllium, et cependant il s'agit d'un métal d'une importance extraordinaire, particulièrement en métallurgie de guerre. Mélangé à raison de 2% avec le cuivre, il donne un alliage plus dur, plus fort, plus résistant que le meilleur acier. — Sur un instrument à éprouve, le meilleur ressort d'acier casse après trois millions de vibrations, mais les ressorts faits avec un alliage de cuivre et de beryllium ou de nickel et de beryllium, vibrent quinze à vingt millions de fois avant de se fracturer.

Les qualités étonnantes de ce métal le rendent d'une utilité précieuse dans la construction des armements de tous genres.

En Allemagne, on se sert de l'alliage "beryllium-cuivre" pour les coussinets des hélices d'avions. Après 12,000 heures de service, ces coussinets ne portent aucune trace d'usure, alors que le coussinet ordinaire laisse voir de la détérioration après seulement trois cents heures d'usage.

Un ciseau de beryllium-cuivre coupe l'acier et possède trois fois plus de force de tension que la *duralumine*, métal employé auparavant dans la construction des avions⁽⁴⁴⁾.

L'alliage beryllium-nickel est aussi résistant à 400 ou 500° centigrade, qu'à la température de la chambre, ce qui lui donne une haute valeur pour les ressorts de valve dans les avions de très grande vélocité.

Une montre construite de cet alliage a été échappée à 3,000 pieds par un aviateur. Après cet accident, il a fallu simplement une nouvelle vitre à la montre pour lui donner sa valeur première⁽⁴⁵⁾.

De tous les éléments connus, le beryllium est le quatrième plus léger. Son usage a largement contribué au succès des avionneries allemandes.

De production peu dispendieuse, ce métal révolutionne tout en métallurgie, et cependant il était sous le contrôle de l'ennemi même sur ce continent. Tout cela sous le couvert de brevets.

Les leaders d'après-guerre modifieront-ils une pareille insécurité pour une nation?

Les brevets pour la fabrication du beryllium originent en Allemagne. Plus tard, les allemands viennent en Amérique breveter leur secret sous le nom de "*The Metal and Thermit Corporation*" de New-York. Les allemands empêchèrent ainsi des maisons véritablement américaines de produire de ce métal, bien qu'elles eussent découvert le procédé pour sa production. Après bien des démarches et des voyages en Allemagne, finalement une entreprise américaine, "*The Beryllium Corporation of America*", obtint des allemands le droit de produire du beryllium, mais resta soumise aux ordres de l'entreprise allemande.

A la déclaration de la guerre, la compagnie germane ordonna à la "Beryllium Corporation of America" de cesser ses envois de beryllium en Angleterre. Ces ordres ne furent pas exécutés, mais légalement la "Beryllium Corporation" était passible d'une poursuite en dommages, si les Etats-Unis n'étaient pas entrés en guerre contre l'Allemagne.

Les anglais comme les américains n'ont découvert que récemment les immenses avantages de ce métal extraordinaire.

Une fois de plus, nous avons été les victimes de brevets.

Tous ces méfaits contre la société ne parlent-ils pas assez fort pour que l'on comprenne la nécessité de restreindre les privilèges exclusifs accordés par les brevets?

(43) Investigation of Concentration of Economic Power—Final Report, p. 184. Monograph no. 31, p. 103.

(44) Investigation of Concentration of Economic Power, Monograph 31, p. 103.

(45) Investigation of Concentration of Economic Power, Monograph 31, p. 103.

Bell Telephone — American Telephone & Telegraph

Le téléphone, autrefois objet de luxe, est devenu une grande nécessité des temps modernes. Peu de personnes peuvent, sans inconvénients sérieux, se priver de ce moyen de communication avec autrui. L'industriel, le commerçant, le banquier, le professionnel, tous périraient dans le monde contemporain, sans le téléphone. Même le cultivateur privé de cet appareil merveilleux, éprouve des difficultés considérables. La plupart du temps, il doit cependant les subir, parce que les profits minimes de son industrie ne lui permettent pas de satisfaire les exigences démesurées du monopole du téléphone. Il lui faudrait vendre, tous les mois, 2,100 oeufs pour le seul paiement d'une ligne téléphonique au coût de \$7.00 par mois, si nous admettons qu'il peut obtenir 1/3 de sou de profit par oeuf. Cette marge de profit sur chaque oeuf est souvent irréalisable. A ces conditions, l'usage du téléphone devient prohibitif. Le cultivateur doit se priver de nombre de commodités de la vie moderne. Ses revenus ne lui permettent pas un standard de vie comparable à celui du citadin. Ces conditions de vie primitives que lui imposent les exigences déraisonnables des monopoles, semblent laisser la société et surtout l'élite indifférentes. Autant de causes qui nous conduisent au paternalisme d'Etat.

Alexander Graham Bell, fondateur du Bell Telephone, a établi son monopole en disputant des patentes aux autres.

Le Cie BELL n'avait pas la priorité de la découverte, mais elle a gagné en Cour Suprême aux Etats-Unis par une voix de majorité, alors que siégeaient seulement quatre juges sur les neuf qui constituent la Cour d'Appel. Tous les juges eussent-ils été présents, la propriété du BELL serait devenue partie du domaine public⁽⁴⁶⁾.

La Cie BELL a débuté par l'achat de ses principaux concurrents; les autres, elle les a vaincus par des luttes légales. Toujours la même méthode pour tout accaparer.

En seize ans, la Cie BELL a institué plus de six cents poursuites pour violation de brevets. La plupart des adversaires, va sans dire, ont baissé pavillon devant la puissance financière que représente l'American Telephone & Telegraph, la mère de notre "Bell Telephone Co. of Canada".

Une seule compagnie a osé lui tenir tête: l'American Cushman Telephone Co.⁽⁴⁷⁾. Aussi a-t-elle encaissé plus de deux cents poursuites. Accablée de frais légaux, elle a dû se rendre aux volontés du monopole et disparaître. Ego nominor leo!

Lorsque le gouvernement américain a voulu redevenir maître des brevets de la BELL Telephone, il en a été incapable. Des procès, de la procédure, des juges favorables à la dictature, ont fini par donner raison à la Cie BELL. Les moyens de défense de cette compagnie devinrent si puissants que durant nombre d'années, elle ne perdit qu'un seul procès et fut condamnée, cette fois, à payer *un centim* à titre de dommages. Les torts des grands monopoles se réparent avec un centim. Les vôtres toujours plus importants, plus graves, peuvent coûter votre ruine devant ces géants malfaisants.

Jusqu'en 1907, cette compagnie a étouffé tout concurrent au moyen de poursuites pour violations de droits d'inventeur. Bien fortifiée derrière ses 9,255 brevets, ⁽⁴⁸⁾ elle ruinait facilement tout adversaire.

Après 1907, l'entreprise tomba sous le contrôle de banquiers. Elle pouvait alors couper les crédits à tout adversaire et l'amener à capituler, sans faire valoir ses brevets. L'arme de ses brevets fut alors mise en réserve.

(46) Investigation of Concentration of Economic Power, Monograph 31, p. 88.

(47) Ibid. p. 89.

(48) Investigation of Concentration of Economic Power, Monograph no. 31, p. 93.

La Cie BELL sur ce continent, qu'elle s'appelle "American Telephone & Telegraph Co." ou "Bell Telephone Co. of Canada", crée la misère dans la société. Elle cache d'abord ses revenus par des moyens répréhensibles, afin que les commissaires chargés par le gouvernement de la surveiller, n'aillent pas réduire ses profits excessifs.

Elle centralise la richesse en restreignant toute activité dans le domaine du téléphone, de la radiophonie, de la télévision; en arrachant à ses clients des prix excessifs pour le service téléphonique local ou interurbain; en jetant sur le pavé des milliers de jeunes filles pour les remplacer par le téléphone automatique; en tenant cachées, des quarts de siècle durant, des inventions de grande utilité pour le peuple.

FINANCE TRUQUEE—Cette entreprise diminue le pouvoir d'achat de millions d'individus et verse de copieux dividendes dans le gousset de quelques-uns. L'American Telephone & Telegraph, je le répète, a même mis au compte de ses frais d'opération, les dividendes qu'elle verse sur ses propres actions. Quel culot!

LA "BELL" CENTRALISE LA RICHESSE—Quand on lui reproche de centraliser la richesse en quelques mains, elle rétorque que plus de 600,000 actionnaires touchent les profits qu'elle retire du peuple et qu'ainsi l'argent n'est pas centralisé en quelques mains. Elle publie des annonces pour capter la sympathie du public et cacher son rôle antisocial. Elle représente ses actionnaires par une bonne vieille dame au visage béatifique, tricotant pour ses petits-enfants. — "Ne touchez pas à notre dividende, dit-elle, car cette bonne vieille attend cet argent pour finir ses vieux jours. La plupart de nos actionnaires sont des personnes âgées et pas une seule d'entre elles ne possède même 1% des actions de notre compagnie"⁽⁴⁹⁾.

Ce monopole, comme celui de l'électricité et bien d'autres, a un faible pour la vieille dame, la veuve et l'orphelin. Il a le coeur si tendre. Ses arguments respirent la philanthropie, la bonté, l'esprit social. Mais étudiez-les, ses arguments, dans le détail; informez-vous sur les agissements de cette entreprise, et vous trouverez d'éloquentes réponses à ces méthodes trompeuses. La Compagnie ne pourrait dire la vérité sans se nuire à elle-même considérablement. Elle trompe le public pour dissimuler la laideur de son commerce accapareur et antisocial.

Un actionnaire qui détiendrait 1% de son capital, serait vingt-cinq fois millionnaire. Pourquoi alors use-t-elle de cet argument pour laisser entendre au public qu'un actionnaire qui ne détient pas même 1% de son capital, est pauvre et mérite protection spéciale pour ses revenus?

Quand elle parle de ses 600,000 actionnaires pour démontrer au public qu'elle répartit bien la richesse, pourquoi ne dit-elle pas que 5% de ses actionnaires contrôlent plus que la moitié de son entreprise au capital de \$2,500,000,000, et touchent ainsi plus de la moitié des revenus? Les trusts ont une méthode spéciale de leurrer le public. Ils finiront par se détruire eux-mêmes par leur propre perfidie.

L'enquête sur la concentration de la puissance économique a démontré que l'American Telephone & Telegraph avait mis plus de 75,000 jeunes filles sur le pavé⁽⁵⁰⁾, en les remplaçant par de la machinerie, sans toutefois réduire le coût de son service public.

Il a été reconnu que si toutes les entreprises aux Etats-Unis avaient agi comme ce monopole, le nombre de chômeurs se serait chiffré à 19,000,000 au lieu de 9,500,000 qu'il était en 1939.

La Cie BELL Telephone au Canada joue un rôle identique chez nous. Elle crée le chômage, diminue le pouvoir d'achat du peuple et centralise la richesse. Elle tyrannise le peuple, mais elle sait le faire en apaisant la révolte de sa clientèle avec des sourires et de la courtoisie. C'est le mot d'ordre passé à son personnel.

(49) Investigation of Concentration of Economic Power, Monograph no. 7, p. 90.

(50) Investigation of Concentration of Economic Power, Monograph no. 7, p. 90.

La "BELL Telephone Co. of Canada", succursale de l'American Telephone & Telegraph, versait à cette dernière la rondelette somme de \$700,000, par année, pour avoir le privilège d'utiliser ses brevets. L'American Telephone & Telegraph détient tous les privilèges des brevets. Elle les loue aux autres. Les plus importants brevets, elle les a tenus cachés durant vingt ou trente ans, avant de les utiliser⁽⁵¹⁾. Elle ne cherche pas l'avantage du public. Elle attend d'y trouver son propre avantage financier ou un moyen de nuire à un concurrent en puissance, avant d'en faire bénéficier sa clientèle.

Un simple exemple pour démontrer comment la compagnie abuse de ses filiales, toujours dans le but de démontrer le coût élevé du service téléphonique.

Jusqu'en 1927, l'American Telephone & Telegraph louait ses appareils à toutes ses filiales. Elle restait propriétaire des instruments. Quand le nouveau téléphone avec acoustique et porte-voix combinés apparut sur le marché, les anciens appareils téléphoniques allaient bientôt tomber en désuétude. L'American Telephone & Telegraph décida, dans un "élan de générosité", de les vendre à des filiales pour la bagatelle de \$38,183,727, encaissant ainsi un profit de 60%, soit \$14,395,800.⁽⁵²⁾ Ces appareils vendus au prix fort sont, aujourd'hui, remplacés en partie par d'autres modèles plus récents. Les filiales ont payé cher pour des appareils rapidement destinés à la désuétude. Tout en cachant des profits, cela favorisait la "Western Electric" ou la "Northern Electric", industries d'appareils téléphoniques contrôlées par quelques gros directeurs de l'American Telephone & Telegraph et de la BELL Telephone Co. of Canada.

Le téléphone, voilà un service public dont l'Etat doit s'emparer moyennant juste rémunération pour l'actif réel, mais sans rémunération aucune pour l'amoncellement de brevets détenus par ces ennemis de la justice. Tout privilège accordé par l'Etat doit avantager non seulement les particuliers, mais aussi le public. Quand une entreprise utilise les avantages que lui confère la loi pour abuser honteusement du public, ces privilèges doivent lui être enlevés sans compensation.

Cesserons-nous, un jour, de ne voir la justice qu'à travers les lunettes des puissants? Finirons-nous de regarder la propriété des monopoles comme des titres sacrés, alors qu'eux se font si peu de scrupule pour appauvrir toute une nation, par des moyens injustes et révoltants?

Le Trust de L'Electricité

Nous sommes assujettis aux dictées des monopoles, de quelque côté que nous nous tournions.

Le plus puissant, le plus intrigant, le plus malhonnête, c'est encore celui de l'électricité. Il bat la marche pour les autres. Il achète les gouvernants, fait élire le groupe de son choix dans les Etats, les provinces et les villes.

Il contrôle 14,000 journaux; dépense annuellement \$30 millions en propagande pour empoisonner l'opinion publique; revise les traités d'Economie Politique; crée des chaires dans les universités; achète des professeurs; les paie grassement pour écrire des livres en vue de tromper la jeunesse étudiante et de tenir les nations des amériques dans l'ignorance d'une saine économie politique. Ses activités ont été mises à jour dans une enquête poursuivie pendant plus de quatre ans par la Commission Fédérale du Commerce à Washington. Cette enquête est contenue dans quelque quatre-vingt-dix volumes. C'est une histoire de véritable brigandage.

Ce trust doit disparaître. Comme un moindre mal, l'Etat doit le remplacer.

(51) Investigation of Concentration of Economic Power, Monograph no. 31, p. 93.

(52) Investigation of Concentration of Economic Power, Monograph no. 21, p. 86.

Ce trust exploite honteusement le peuple de toutes façons. Dans le seul district de Montréal, en onze années seulement, il a extorqué injustement cent trente-deux millions de dollars. Jugez de ce qu'il a pu coûter à toute la province de Québec depuis trente ans.

Il limite l'initiative des faibles, étouffe de petites industries à leurs débuts. Il profite de l'ignorance dans laquelle est tenu un trop grand nombre de commerçants et de fabricants pour les voler directement.

Ce trust ne connaît pas de maître. Toute une série de commissions sont venues à tour de rôle donner au peuple l'espoir qu'on le protégerait contre ce monopole répugnant. Ces commissions ont changé leur nom pour cacher leur propre discrédit et pouvoir affronter de nouveau le public. Le trust triomphe partout pour l'instant. Cependant, l'éveil s'annonce chez les consommateurs. Pour calmer l'opinion justement indignée, le trust réduit parfois ses taux, mais aussitôt il change graduellement ses clients de catégorie pour les soumettre, un à un, à des tarifs plus élevés. C'est rien moins que de la ruse. Un Bureau Fédéral supposé nous protéger contre le vol par les compteurs, ne vérifie jamais les transformateurs placés avant l'entrée du courant dans certains compteurs, et joue ainsi le rôle de complice dans le vol du public par ce trust.

C'est ainsi que des lectures de consommation multipliables par 50, le sont par 100, et que le client paie injustement pour le double ou le triple de sa véritable consommation. Ni les Commissions, ni les Régies, ni le Bureau Fédéral n'ont découvert ce moyen de voler le public. Ils accordent entière confiance au trust et laissent les consommateurs se faire dépouiller.

Pour perpétrer son mal indéfiniment, être plus maître dans les villes que les citoyens eux-mêmes, ce trust s'est fait octroyer des chartes perpétuelles. Notre législation a sanctionné de telles lois. Un gouvernement soucieux de mettre de l'ordre dans la société devra traiter ces lois comme des chiffons de papier, s'il veut rétablir une saine hiérarchie des droits dans une municipalité.

Le trust de l'électricité, en vendant une nécessité de la vie moderne, des prix excessifs, diminue le pouvoir d'achat des masses et centralise la richesse dans les mains d'une faible partie de la population. C'est un chancre social dont la plupart des provinces du Canada se sont débarrassées. La province de Québec attendra-t-elle d'être mortellement atteinte pour se protéger contre ce monopole classé par le président ROOSEVELT, comme une organisation de brigandage?

Conclusions

Il resterait encore tout un monde de monopoles à dénoncer, tels ceux du pétrole, de l'acier, des fertilisants, des produits chimiques, de l'optique, etc. Mais il ne faut pas prolonger indéfiniment cette étude.

Le prêt à intérêt, les émoluments, les jetons de présence, les salaires excessifs payés aux directeurs et présidents des puissantes sociétés à capital-actions, les dividendes sur des capitaux artificiels, les monopoles, et l'accumulation de brevets en quelques mains, apparaissent comme les causes dominantes de l'appauvrissement des masses dont l'aboutissant ne peut être autre que le socialisme.

L'Etat pourra entreprendre d'immenses travaux, en vue de distribuer de l'argent dans les rangs du peuple. Aussi longtemps que ces sources de concentration de la richesse, que ces pompes aspirantes demeureront en activité, le peuple restera toujours dans l'indigence, et l'Etat devra venir à son secours par des mesures conduisant au socialisme.

Il faudra des procédés héroïques maniés par des chefs instruits, désintéressés et bien vertébrés, pour mettre fin à un tel accaparement de tous les leviers de commande par une ploutocratie. Il restera impossible de remédier à ce mal sans qu'un cinq

pour cent de la population en souffre considérablement. Pour un ordre nouveau et éviter le socialisme complet, nous devons nous préoccuper plus, désormais, du quatre-vingt-quinze pour cent de la population que des droits souvent discutables et parfois inexistants du cinq pour cent des bénéficiaires de ce régime capitaliste vicié.

La classe des parasites devra disparaître et le travail reprendre sa place d'honneur, recevoir sa juste récompense.

Il n'entre pas dans le cadre de ce travail déjà long, de préconiser, dans le détail, les réformes nécessaires, bien que je sois fortement tenté d'en faire l'audacieux essai, devant l'inertie quasi générale de notre élite.

Pour l'heure, une forme de médecine et de dentisterie d'Etat s'impose. Inutile de tonner contre le socialisme, quand on accepte allègrement un régime qui nous y mène tout droit.

Devant la grande pauvreté de la majorité, la nationalisation de la médecine et de la dentisterie apparaît comme un mal inévitable qui retardera le dénouement fatal où nous achemine la concentration de la richesse chez les nations américaines.

PHILIPPE HAMEL,
6 rue d'Aiguillon,
Québec.

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Revue des Revues

"DENTITION" OU "DENTURE"? — Voici deux termes que le public confond volontiers. Non seulement il les confond, mais il n'emploie que le premier, oubliant même l'existence du second, qui seul est logique. A la *Revue Odontologique*, nous avons, chaque fois que cela fut possible, cherché à opérer la substitution nécessaire, car, il n'y a pas que le public qui commet cette erreur. Les dentistes, hélas, à qui cela ne devrait pas arriver, emboîtent le pas au public, au lieu de corriger son erreur.

Nous avons lu, il y a quelques mois, dans un illustré des plus intéressants (*Monde et Voyages*, n° 173, mai 1938), la note ci-dessous, que nous croyons d'ailleurs avoir provoquée:

"*Dentition* et *denture* ne sont pas du tout synonymes. Lorsque Flaubert décrit Mme Homais croquant des petit pains 'malgré sa détestable dentition', il commet une impropriété: c'est 'denture' qu'il aurait dû écrire. *Le Larousse du xx^e siècle* a raison de mettre ses lecteurs en garde sur ce point: la 'denture' est l'ensemble des dents, comme la chevelure l'ensemble des cheveux, comme la mâture l'ensemble des mâts d'un vaisseau, et l'on doit dire d'une personne qui a les dents saines, bien plantées, quelle a une belle 'denture'. Quant à 'dentition', ce terme désigne la sortie des dents et leur évolution, dont les diverses phases se produisent dans le jeune âge. Mme Homais pouvait avoir une excellente 'dentition' dans son enfance et n'avoir pas connu les troubles de la poussée des dents; mais, adulte, elle avait une détestable 'denture'."

Et voici que dans le monde médical, l'on s'aperçoit aussi de l'erreur commise. Notre grand confrère, *La Presse Médicale*, dans son numéro du 23 novembre courant, publie la note suivante:

"Un de nos confrères de Strasbourg appelle fort judicieusement l'attention, non sans humour, sur l'emploi défectueux que font un grand nombre d'auteurs, et des plus réputés, du mot dentition.

"Littré, dans le Dictionnaire de la langue française, édition 1863, dit textuellement: 'C'est une faute de dire une belle dentition pour une belle denture'. Car, dit-il, dans l'article Dentition, celle-ci est: 'L'éruption naturelle des dents aux diverses époques de la vie' alors que la Denture est l'ensemble anatomique des dents.

"Les dictionnaires plus récents, celui de Larousse par exemple, répètent aussi que: 'dentition' signifie 'formation, accroissement et sortie naturelle des dents'. 'Denture' signifie 'ensemble des dents, manière dont les dents sont rangées'. On dira par exemple: La dentition est une époque périlleuse chez les enfants; cette jeune fille a une magnifique 'denture'.

"En somme la 'dentition' est le processus physiologique qui forme la 'denture'. Sachons donc employer plus souvent ce mot de 'denture' laissé trop de côté par les auteurs modernes. Une bonne note à l'Alsace de nous avoir rappelé au respect de notre langue française".

P. D.

Et maintenant, nous voulons espérer que les dentistes ne seront pas les derniers à opérer ce... redressement, et que selon le conseil si judicieux qui nous est donné, ils s'imposeront le devoir d'employer plus souvent le mot 'denture' et d'en apprendre le sens à leurs patients.

M. F.

LA BROSSE A DENTS: SON USAGE, SES ABUS, par le Dr S. Hirschfeld.

Les fabricants de produits dentifrices cherchent à atteindre et à convaincre non seulement le "bon" public mais encore le praticien, espérant que sur sa recommanda-

tion les malades achèteront leurs produits. A cet effet, ils envoient à profusion littérature et échantillons gratuits aux jeunes diplômés, afin qu'ils aident leur propagande. Quelquefois de vieux praticiens expérimentés sont cités par eux afin de faire valoir un produit astringent, antiseptique, ou neutralisant.

1° *Dentifrices astringents*. — Certains produits astringents sont, d'après les brochures, recommandés préventivement pour les bouches saines, ou d'une façon curative pour les gencives enflammées ou saignantes. *Suivre aveuglément une annonce frôle de près le crime!* Un dentiste averti hésitera à prescrire, dans le cas de gencives malades, un produit qu'il ne connaît pas. Il examinera le malade, fera une observation complète et cherchera à déceler si cette gingivite ou cette hémorragie n'est pas le symptôme local d'un état général sérieusement et peut-être fatalement atteint. Le dentiste sait, par son expérience pratique, que, dans les cas de gingivites graves l'usage des remèdes est d'un petit secours. Il cherchera donc plutôt à éliminer plus ou moins les facteurs étiologiques locaux et à rétablir une circulation normale.

Contre-indications. — En fait, l'usage de dentifrices astringents dans le domaine préventif des maladies chroniques de gencives (y compris les gingivites marginales, interproximales, la pyorrhée et l'angine de Vincent), est souvent contre-indiqué.

Il faut activer la circulation et la rendre *normale* plutôt que la diminuer par des astringents.

Il faut:

- (a) éliminer tout traumatisme;
- (b) faire un curetage;
- (c) stimuler les gencives avec la brosse à dents, les doigts ou des massages spéciaux;
- (d) rétablir une fonction masticatoire normale.

Ces quatre points doivent être exécutés sérieusement pour obtenir un bon résultat. Peu importe la quantité d'astringents entrant dans la composition du dentifrice employé: ils seront peu utiles.

Une erreur fréquente commise par les praticiens inexpérimentés dans le traitement de la pyorrhée est d'employer les astringents pour supprimer l'hypertrophie et la décoloration ou l'hémorragie gingivale. Par la suite, après un curetage sous-gingival incomplet, la gencive marginale se resserre autour de la racine, laissant le pus se former dans les clapiers et donnant lieu à un abcès péri-dentaire. Dans les cas de gingivite marginale chronique ou de gingivite interproximale, le traitement rationnel est le même que pour la pyorrhée; l'action thérapeutique des dentifrices astringents est probablement nulle.

Même dans les cas où la gingivite est associée à un état général atteint (menstrues, fièvres infectieuses, diabète ou empoisonnement) on ne peut attendre d'une médication astringente un résultat satisfaisant. L'auteur cite 2 cas à l'appui de sa thèse.

2° *Dentifrices antiseptiques*. — Ces produits ne sont pas tellement nécessaires pour l'auteur car ils se diluent dans la salive rapidement, on se rince immédiatement après le brossage, leur action sur les microbes buccaux est donc aléatoire. En admettant qu'on arrive à supprimer quelques millions ou quelques centaines de millions de microbes, en quelques minutes ou en quelques heures d'autres prendront leur place. Les microbes sont avec nous dès notre naissance jusqu'à notre mort... et même après!

Dans le cas d'infection aiguë ou subaiguë des lavages antiseptiques fréquents sont évidemment nécessaires mais là aussi on est enclin à croire que c'est surtout l'action *mécanique* qui opère.

De même en pyorrhée. Il ne faut pas attendre que des antiseptiques incorporés

dans un dentifrice hâtent la guérison. Un facteur local important est la *résistance* des tissus. Elle compte plus que l'accroissement en nombre ou en virulence des micro-organismes et l'auteur ajoute qu'il doute que l'emploi des topiques rende un réel service dans le traitement de la pyorrhée.

Les fabricants de dentifrices donnent fréquemment dans leur littérature des rapports bactériologiques sur les propriétés germicides ou antiseptiques de leurs produits. Ils s'accompagnent de micro-photographies, de tubes de cultures émanant d'un laboratoire complaisant, mais dès 1927, il y a 10 ans, Furer et Léonard prouvaient, après des expériences sur de nombreuses pâtes dentifrices, que le staphylocoque doré n'était pas détruit après 5 minutes de contact. On peut en conclure, dit l'auteur, qu'il ne faut pas prendre trop au sérieux les qualités antiseptiques ou germicides des dentifrices. On a pu se rendre compte que dans différents produits vendus sur les marchés, on a trouvé une grande quantité de microbes tels que le Friedlander, le staphyl-pyogène doré, des bacilles subtilis, etc. Il faut donc surtout chercher un dentifrice stérile et non le destructeur de tous les microbes. De plus il faut qu'il ne contienne pas de produits irritants pour la muqueuse buccale qui lèseraient aussi l'état général.

COMMUNICATION DE MORTS ANESTHESIQUES, par A. King Lotz (Wilmington).

Depuis des années King Lotz réclame la création d'un office qui centraliserait les cas de mort par anesthésie et en ferait une étude critique.

Il présente tous les cas de mort pouvant être attribués à l'anesthésie (sauf la locale et la régionale) qui se sont produits dans l'hôpital dont il est l'anesthésiste, du 1er juillet 1917 au 1er octobre 1936. Ces observations sont inédites, elles portent sur:

- 19.000 anesthésies au protoxyde d'azote
- 10.000 anesthésies à l'éther
- 2.190 anesthésies rachidiennes
- 452 anesthésies au chloroforme
- 150 anesthésies à l'avertine
- 60 anesthésies au cyclopropane

(A) MORTS SUR LA TABLE D'OPERATIONS

(a) Ether (5 cas).

Un homme (cas 1) âgé de 38 ans, porteur d'une volumineuse hernie inguinale irréductible, présente brusquement, sans symptôme prémonitoire, un arrêt respiratoire, au moment où les intestins étaient complètement réduits.

Un homme de 67 ans (cas 2) atteint de cancer du maxillaire meurt après 1 h. 1/4 d'anesthésie. Il avait reçu 217 grammes d'éther. Arrêt respiratoire.

Un autre homme de 67 ans (cas 15) atteint également de cancer du maxillaire est opéré. On tente d'abord, sans y parvenir, de faire une anesthésie endo-trachéale. A la 80^e minute, il se cyanose brusquement; arrêt respiratoire; mort, peu après.

Un homme de 28 ans (cas 3), porteur d'une hernie, est endormi par un interne. Il meurt par surdosage.

Un enfant de 13 ans (cas 14) subit une amygdalectomie. L'interne qui l'endort donne 150 grammes d'éther. Syncope respiratoire par surdosage.

(b) Protoxyde d'azote (6 cas).

Un homme de 19 ans (cas 4) entre en état de shock provoqué par un écrasement de la main. Quelques heures après il est sorti de son shock, mais il a perdu du sang et ses muqueuses sont pâles; on se décide cependant à l'amputer. Au moment où

l'opération se termine, il fait une syncope respiratoire dont la respiration artificielle le tire pour quelques instants, puis il meurt malgré le sérum intraveineux et une injection intra-cardiaque. On apprend ensuite qu'avant l'opération, il y avait sous son lit une véritable mare de sang.

Une femme de 30 ans (cas 5) atteinte de pyonéphrose est opérée parce que son état est grave et ne s'améliore pas et qu'on ne gagne rien à attendre. Son anémie est marquée. Néphrectomie, quelques minutes avant la fin de l'opération, elle meurt. Autopsie: péritonite généralisée.

Un enfant (cas 6), malade depuis plusieurs semaines, subit une paracentèse du tympan. Il est considéré comme un "bon risque" pour le gaz. Avant même que l'opération ne soit commencée, il fait une syncope respiratoire.

Une femme de 30 ans (cas 7) présente une infection amygdalienne qui retentit sur son cœur. Elle est opérée dans de mauvaises conditions techniques. Syncope respiratoire puis une minute après environ, arrêt cardiaque. Echec de l'adrénaline intra-cardiaque. Autopsie, collapsus pulmonaire unilatéral. Cœur normal.

Un homme de 39 ans (cas 16) souffrait de mastoïdite depuis 8 jours. On pense à une septicémie et à une thrombose probable du sinus latéral. A la quinzième minute, il est pris de mouvements convulsifs qui durent $\frac{1}{4}$ d'heure et se terminent par la mort. L'autopsie n'a pas pu être faite.

Une femme de 52 ans (cas 17) qu'on ampute pour gangrène des orteils pas ostéomyélite, présente au bout de 29 minutes un arrêt respiratoire, sans signe prémonitoire. A l'autopsie, glomerulonéphrite, avec hypertension; mort par décompensation aiguë.

(B) MORTS TARDIVES.

(a) Avertine (3 cas).

Une malade de 40 ans (cas 11) atteinte de maladie de Basedow, au repos depuis 15 jours, subit une thyroïdectomie sous 0 gr. 10 d'avertine par kilogramme. Elle meurt au bout de plusieurs jours, probablement d'hyperthyroïdisme, bien que le chirurgien qui l'a opérée incrimine l'avertine.

Une femme de 70 ans (cas 12), à très mauvais myocarde, très fatiguée, classée comme "très mauvais risque" est opérée. Elle meurt 3 jours après, des suites de l'anesthésie, prétend le chirurgien.

Un homme de 62 ans (cas 13) est opéré pour cancer du pharynx, il meurt 12 heures après, sans avoir repris connaissance et probablement par surdosage.

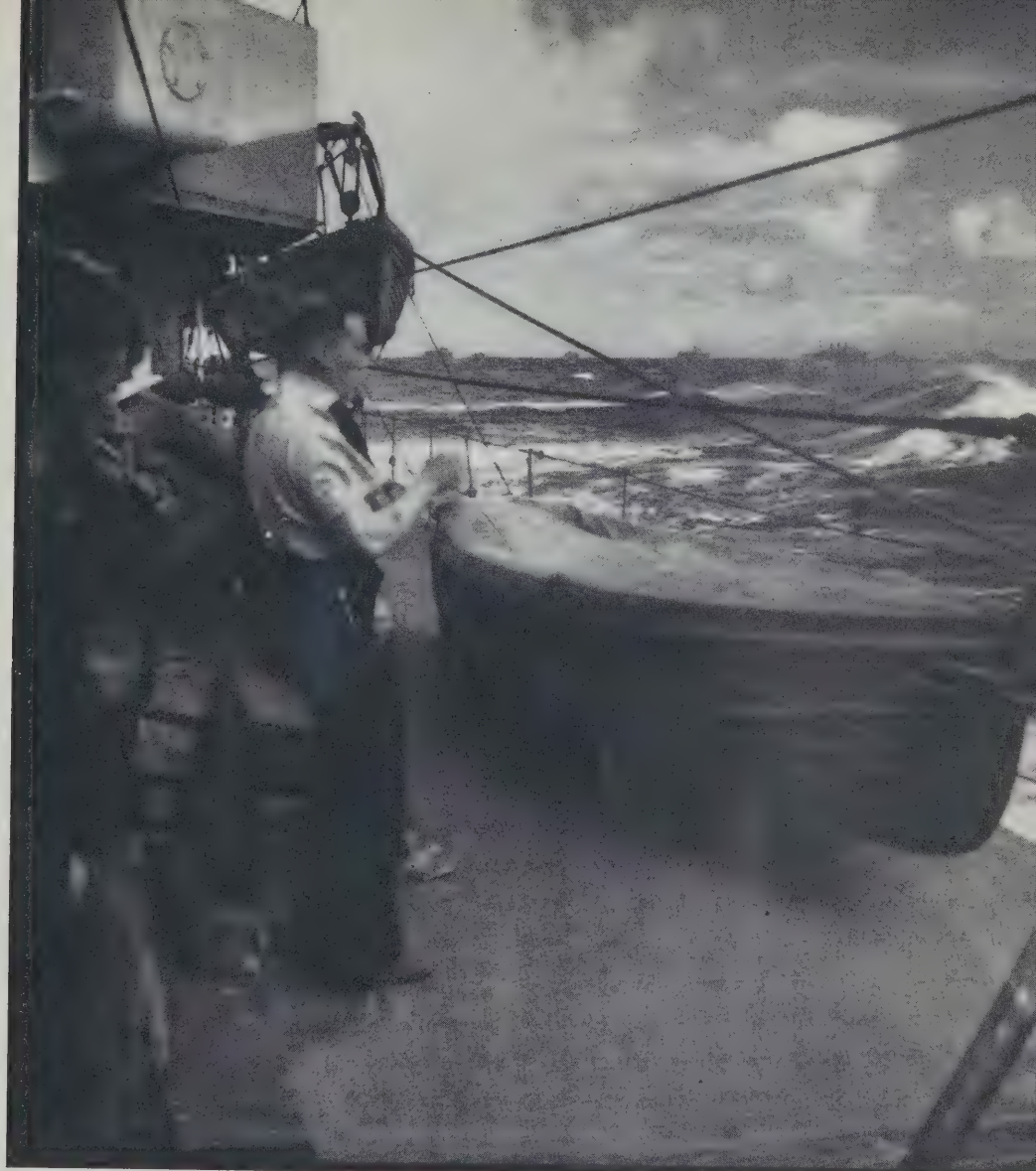
(b) Anesthésie rachidienne (3 cas).

Une femme de 42 ans (cas 8), anémique (45% d'hémoglobine) est opérée d'hystérectomie. Au cours de l'opération, à la 7^e minute, la pression sanguine qui était à 13 au début, tombe à 0. La malade meurt le 3^e jour d'oedème pulmonaire.

Une diabétique (cas 9) est amputée de jambe pour gangrène, elle meurt 3 jours après l'opération. Son sucre n'avait pas augmenté.

Une femme de 45 ans (cas 10) est opérée d'hémorroïdes qui avaient beaucoup fatigué son état général. Le 35^e jour elle meurt de méningite à pyricanique.

Certaines de ces morts auraient été évitées si l'on avait refusé de donner une anesthésie générale, d'autres si l'on avait attendu que le diagnostic se précise ou que l'état général s'améliore.



Courtesy of Saturday Night

LIFE-LINE TO BRITAIN: An Atlantic convoy, seen from the deck
of an armed auxiliary cruiser.

Methinks I see in my mind a noble and puissant nation rousing herself like a strong man after sleep, and shaking her invincible locks: methinks I see her as an eagle mewing her mighty youth, and kindling her undazzled eyes at the full midday beam.—Milton.



DR. LLOYD M. GROSE,
President,
Academy of Dentistry,
Toronto.

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Dentistry in a National Health Program^{*}

by VERN D. IRWIN, D.D.S., M.P.H.,[†] Minneapolis, Minnesota

TWENTY-FIVE years ago, the idea of including dentistry in a public health program was almost unheard-of. Public Health was considered as dealing with such obvious menaces as polluted water supplies and smallpox epidemics; whereas dentistry—far from being a public health problem—was a matter concerning only the man with a toothache and his dentist. Today, any health need which affects a large number of people is recognized as belonging in the realm of public health. Dental disease has a greater claim to attention as a public health problem than almost any other condition known to mankind, since dental ills afflict nearly all of us, and we possess striking evidence today of the results of neglecting those ills.

THE DENTAL HEALTH PROBLEM

In the recent selective draft in the United States, 188,000 men out of the first two million examined were rejected because of dental deficiencies. American Army dental requirements were very low, even before we were actually at war, and those standards have now been still further lowered since the need for men became greater. Yet despite the fact

that a man was required to have only twelve serviceable teeth—six upper and six lower teeth in reasonably good occlusion—approximately 10 per cent of the men examined failed to meet this requirement, and dental disease and defects outranked all other causes for rejections. It is highly probable that the percentage of dental disability is even greater in older age-groups. And, since dental disease is no respecter of international boundaries, a similar situation no doubt exists in Canada.

Various surveys indicate that dental disease begins very early in life and affects practically everyone. A recent study in an Eastern community showed that cavities were present in the teeth of 47 per cent of the two-year-old children, 79 per cent of the three-year-olds, 89.5 per cent of the four-year-olds, and 96.5 per cent of the five-year-olds¹. A dental survey of children aged 6 to 14 years, conducted in 1933-34 under the direction of the United States Public Health Service in twenty-six states, showed that approximately 90 per cent of the children needed dental treatment². Another study indicates that children's teeth are decaying six times as fast as they are being

[†] Dental Health Director, Minnesota Department of Health.

^{*} Read before the Ontario Dental Association, Toronto, Ontario, May 20, 1942.

filled³. Publication of these figures has opened our eyes to the need for a nationwide dental health program.

Prevention has always been the keynote of public health work. In regard to the chief dental diseases, however, we are as yet unable to recommend reliable preventive measures. To a certain extent we can prevent pyorrhea, but such prevention requires considerable intelligence and co-operation on the part of patients. As for dental caries, experience has demonstrated that neither mouth cleanliness nor good nutrition is a dependable preventive of this universal disease. All we can safely tell the public is that loss of teeth from nearly all causes can be prevented if dental care is obtained early enough and often enough.

Therefore, since no other practical course is open to us, our present problem is to get people to go to the dentist for treatment of their dental defects. Assuming that we could educate people to do this, have we enough dentists to take care of the vast accumulation of defects and disease with which they would be confronted?

Figures, recently compiled for the United States, indicate that we have approximately one dentist for every 1,700 persons who require dental care⁴. Figures for Canada, with which Dr. Thomas Marshall kindly supplied me, indicate that you have, in peace time, one dentist for every 2,900 persons, but at present 20 per cent of your 4,000 Canadian dentists are in the army⁵.

The dentist's average working year is about 1,700 hours. Each dentist in the United States, then, could give each of his 1,700 potential patients one hour of his time per year. In Canada, each dentist, even in normal times, would need to work 58 hours a week and 50 weeks a year if he were to give each of his 2,900 potential patients even one hour a year of his services. It is obvious that in

neither country could the accumulated dental defects of adults be repaired in the amount of time that could possibly be devoted to them.

Any practical dental health program, then, must be designed for future generations and therefore limited in its scope. What should be the nature of that limitation? Regarding this problem, Dr. Thomas Parran, Surgeon General of the United States Public Health Service, says: "Assuming that we cannot multiply by several times the number of dentists overnight, nor can we secure overnight tremendously increased expenditures on the part of the general population for dental care . . . we can do the best job under present knowledge of preventive dentistry by taking care of the annual crop of new dental defects which appear in grade school children. In a relatively few years, even if only that were done, some of the old folks would have died off and we would have raised a generation in this country of children later to become young adults and adults whose dental needs were met from the beginning of a total expenditure of the dentist's time and of the patient's money vastly less than that which now is being spent in trying to patch up the results of ten, twenty, or forty years of neglect⁶."

We now have enough figures on hand to indicate that the problem can be solved over a period of time if we tackle it as Dr. Parran suggests. In children between six and eighteen years of age, permanent teeth decay, on the average, at the rate of less than one cavity per year⁴. Thus each child's dental needs could be taken care of each year in approximately one hour of dental service time, provided that cavities were not allowed to accumulate from year to year. It is obvious that in order to keep each child's needs, in terms of dental service time, down to one hour a year, dental care should be started at two years of

age and no defects allowed to accumulate. With cavities in the deciduous teeth filled promptly, and those in the permanent teeth taken care of as soon as possible after they occur, these children would not average more than one hour a year of dental service time. With each year that the teeth are neglected, however, the individual's dental problem increases, until by the time he reaches young adulthood he may have lost a great many teeth and his dental condition is likely to require far more dental service time in replacing missing teeth than would have been needed if he had received early care, continued on a year-to-year basis. Incidentally, it costs from three to twenty times as much to replace a lost tooth as it does to fill a cavity. This economy factor should receive more of our attention.

MEETING THE DENTAL HEALTH PROBLEM

The aim of a national dental health program is to prevent the loss of teeth and maintain mouth health. The only practical method of accomplishing this aim is through early and frequent dental care. Therefore, the chief need in meeting the present dental health problem is to motivate people to obtain such care for themselves and their children. Motivation should start where the dental-care program logically starts—with the preschool child.

In Minnesota we use a dental health card system for preschool, grade school, and high school children, and we are planning to extend this system to include adults also. The preschool dental health card carries a short message to parents, pointing out the need of keeping baby teeth in good repair and the economy of early and frequent dental care. It also asks the parents to take the child to the family dentist and have all his necessary dental work done. These cards are dis-

tributed to parents of preschool children by public health nurses or chairmen of local dental health committees which are usually part of some organization interested in child welfare. The Minnesota State Parent-Teachers Association has adopted the State Health Department's preschool dental health program and is helping materially in getting preschool children to the dentist.

If, when he examines the child's mouth, the dentist finds that no dental work is needed, he signs the card in the appropriate place, and it is returned to the nurse or other person from whom the parent received it. If the child needs dental work, the dentist does not sign the card until all necessary corrections have been completed.

The local dental health committee chairman keeps a record, on report sheets provided by the State Health Department, of all preschool children who receive cards, together with the dates when the cards are given out and when they are returned. Eventually the cards are returned to the Health Department. It is expected that they will constitute the basis of valuable records on the percentage of preschool children in various communities who are receiving adequate dental care.

Our grade-school dental health card is somewhat similar to the preschool card. It carries a message to parents concerning the value of good dental health to the school child and requests the parents to take the child to a dentist for examination and necessary treatment. The grade-school dental health cards are usually given out by the teachers and returned by the children to their teachers, who keep classroom records similar to those kept by chairmen of local preschool dental health programs. Public health nurses often take full charge of the program, including distribution of the cards and keeping records.

From elementary schools, (where the dental health card system is used,) we receive reports showing that an average of 60 to 80 per cent of the children in those schools have "O.K. mouths" by the end of the school year, and a few places are able to report 100-per-cent dental corrections. The longer the program is in operation, the greater is the percentage of O.K. mouths at the end of the school year. The benefits are naturally accumulative.

This spring we introduced the dental health card system into Minnesota high schools. The dental health card provided for high school students is addressed to the student himself, not to his parents; thus placing on the older child a personal responsibility for obtaining dental care. The appeal to the high school student is made on the grounds of good looks, good health, a pleasing personality, and success in getting and holding a job. Cards are distributed and records kept by the physical education teacher, social science teacher, home room teacher, or school nurse.

The program for the dental care of school children requires that dentists actually do children's dentistry. To prepare them for this work the Minnesota Department of Health, in co-operation with the Minnesota State Dental Association, has given several postgraduate courses in children's dentistry for the practising dentists of the state. These courses have been well attended and have resulted in improving the knowledge and skill of those who have taken them.

DENTAL HEALTH EDUCATION

Motivation of children and adults to obtain early and frequent dental care depends largely upon a sound educational program. Most efforts to teach dental health in the past have been complicated by trying to teach too much; too much that is theoretical rather than fact-

ual; technical rather than practical; and too many things that the layman has been told he "must" do in order to protect his teeth. Dental research carried on during recent years has not solved any of our major problems, but it has at least shown us how much we *do not* know, and in so doing has greatly simplified what we can properly teach.

Among the best places for carrying on dental health education are the elementary and high schools. This is so because health is one of the avowed objectives of contemporary education, and health studies are included in practically all school curricula. Moreover, children who are in school constitute a section of the population which is greatly in need of dental health teaching and also readily accessible to such teaching.

However, while we have a ready-made audience for dental health teaching, we lack suitable materials for use in educational programs. One great need of dental health education at present is for adequate, reliable material, carefully selected, well written, and adapted to the needs and capacities of school children, young adults, teachers, parents, nurses, both in training and in service, college and university students, and persons engaged in business and industry.

In a dental health program for adults, emphasis needs to be placed on the health benefits, the conservation or improvement of personal appearance, and the saving of expense that is occasioned by regular and frequent dental care. Such a program can be of particular benefit at the present time, when increased efficiency is demanded in nearly all lines of work. Good dental health increases general efficiency and reduces the number of absences from work that are caused both directly and indirectly by dental disease—directly if toothache or other acute mouth conditions prevent the employee from reporting for duty, indirect-

ly through infections that may be set up elsewhere in the body as a result of dental abscesses or pyorrhea. Dental health programs for adults are just now beginning to receive the attention of public health dentists. To make them successful will require the co-operation of employers, employees, labour unions, and the professions.

The use of widely distributed literature is a simple and fairly inexpensive way of supplying dental health education to the public. Other means that may be effectively used include newspaper and magazine articles, radio programs, and talks before lay groups, in which the speaker may often make use of lantern slides or motion pictures.

Care should always be taken to avoid presenting controversial material to the public as facts. In order to guard against this frequent error, it is advisable that all newspaper articles, radio programs, and talks for laymen be first approved by a committee on education selected from among members of the dental profession who have a particular interest in this aspect of the subject.

The fact that many erroneous and controversial statements are contained in dental health educational material supplied to the public was made evident by a study that we made last year of dental health educational literature distributed by official groups in the United States and Canada. In a representative section of the material gathered from pamphlets, books, and articles, nearly half the statements given out to the public as facts were found to be controversial in nature. That is, they were statements that would be questioned by responsible members of the dental profession. In the first lot of material examined, we found that 31.4 per cent of the statements made were factual, 24.2 per cent were fallacious, and 44.2 per cent were controver-

sial. In newer material examined about a year later 46.2 per cent of the statements were factual and only 5.5 per cent fallacious, but 48.2 per cent were controversial; a percentage even higher than in the earlier material. Besides that, some of this material was not at all well adapted to the needs of readers for whom it was intended. Material written for children was particularly poor. I hope that our study, which is to be published shortly, will lead to improvements in the dental health educational literature, both in accuracy of content and suitability of style.

DENTAL RESEARCH, THE BASIS OF DENTAL HEALTH EDUCATION

Only through research can we gather and evaluate the facts on which future work must be based. Research, therefore, should be a vital part of a national dental health program. But funds for dental research have never been easy to obtain, mainly because of the rather anaemic appeal of the dental health problem. The wealthy layman who wants to leave bequests for the improvement of public health is much more likely to give his money for research in cancer or heart disease than for the study of dental problems. Our only recourse, in this situation, is to request dental research funds from our national governments.

With such funds as are now available, various dental research projects are being carried on in schools of dentistry and by other institutions and individuals. Such projects should be closely watched by the dental profession. We must be alert to new discoveries being made and able to determine the validity of conclusions reached by means of experiments. Only in this way can we be prepared to relay dependable information from the laboratory to the layman.

DENTAL CARE OF THE INDIGENT

Dental health programs are beginning to educate the public as to their need of dental care, but such programs, in order to be effective, must make some provision for corrective treatment for those who cannot pay for such treatment. Methods of providing dental care for the indigent vary greatly in different places and under different governmental and community set-ups. Innumerable opinions exist as to how the situation should be handled, but it seems to be generally agreed that the money for dental treatment of the indigent should be furnished mainly by national governments. Organization of dental care programs, however, is usually best carried out by local communities.

Since funds for the dental care of the indigent are always limited, many persons who need dental care must necessarily go without it. The technical advisory committee on dentistry to the Division of Social Welfare in Minnesota has recommended that dental service be given to indigent cases in the following order:

First: Persons requiring immediate treatment for the relief of pain or the elimination of infection.

Second: Persons requiring early treatment, such as fillings or prophylaxis; also corrections of a nature favouring preventive procedures. Such procedures, in the order of their importance, are fillings for decayed permanent teeth in children aged six through to eighteen years; fillings for decayed teeth in adults who have maintained a satisfactory complement of teeth; fillings for decayed deciduous teeth, preference being given to patients whose defects have accumulated over the shortest span of time; and treatments for gingivitis and early pyorrhea for persons in whom good dental health is likely to be re-established by such treatments.

Third: Persons requiring extensive treatments to improve the functions of the mouth, such as treatment of chronic infection or construction of dentures.

Fourth: Persons requiring special types of work not covered by the preceding groupings.

It should be constantly borne in mind that the care of dental emergencies, mainly the extraction of teeth, is made necessary by comparatively long periods of dental neglect. If we can gradually bring more and more attention to bear on *protective* dentistry, beginning with the two-year-old child, we shall gradually cut down the vast accumulated backlog of dental deficiencies. A dental care program for the indigent is on the right track when it expends the bulk of its funds in first repairing small defects in the permanent teeth of six-, seven-, and eight-year-old children and then continues the care of these same children as they grow older. Such a program will prevent loss of teeth in the children treated, and will reduce future expense for whoever must pay their dental bills.

It should be stated here that a system of public health dental care based on these principles and carried out in private dental practice, using a reduced fee scale, is not what is commonly understood as "socialized dentistry." Public health dentists protect the rights of private practitioners. Their aim is to devise means for providing dental care for the indigent which will not work hardship upon the dentist in private practice. The problem that exists can probably be most adequately met by the provision of state and federal funds to pay dentists, on an acceptable reduced fee schedule, for the work they do on indigent patients. It is readily apparent that such a system, far from involving political domination of the dental profession, really tends to keep all dental practice within the control of the profession itself.

MEASURING THE ACCOMPLISHMENTS OF THE PRIVATE DENTIST AND PUBLIC
A DENTAL HEALTH PROGRAM HEALTH DENTISTRY

In order to convince the public in general, and in particular those who hold the purse strings in health departments and government, of the benefits of dental health programs, it is absolutely necessary that we have facts and figures to present, showing definite improvement in dental conditions through the operation of these programs. There has been, up to now, a serious lack of satisfactory statistical methods for measuring the effectiveness of dental health programs. In this matter we may learn from the experience of workers in other health fields. Physicians are required by law to report communicable diseases and causes of death to health departments. From such reports, over a long period of time, health authorities are able to evaluate programs for the eradication of various diseases. Records from death certificates indicate, for instance, that there has been a progressive decrease in mortality from communicable diseases during the last fifty years, thus amply justifying expenditures for public health programs that have been directed toward controlling those diseases.

A similar system could be used advantageously for recording what we may call "tooth mortality." In Minnesota we have instituted such a system and it seems to be working well. We ask dentists to report the extraction of permanent teeth for all child patients aged from six to eighteen years inclusive. The State Department of Health provides the dentists with forms for keeping these records of extractions, which are mailed to us once a month. At present this system is in operation experimentally in six out of 87 counties. It seems, however, to be worthy of wider use, since it is simple and easy to handle, both by dentists in their offices and by the statistician at the State Department of Health.

What part should the private dentist play in a public health dental program?

He should educate his own patients, through the use of models, charts, pictures, radiographs, and other means, as to the need for early and frequent dental care and stimulate them to obtain such care for themselves and particularly for their children.

He should advise his patients as to the need of thorough dental care, not just extracting an abscessed tooth, for instance, for also pointing out the desirability of radiographs, bridges, prophylaxis, or any other features of diagnosis or treatment that may be needed.

He should always avoid giving the impression that he does not care to do work for children. If he feels that he cannot handle child patients in his practice, he should refer such patients to someone who is willing and able to do so. Far from being a minor aspect of dental care, children's dentistry is the keystone of future dental health.

He should remind patients on a pre-arranged plan by letter or telephone when he thinks they should come into his office for a check-up. The majority of patients will appreciate the personal interest shown by a dentist who uses a recall system.

He should give conscientious dental care and instruction to indigent patients referred to him by welfare organizations.

He should be willing to serve as technical advisor to welfare organizations.

He should co-operate with his Health Department by keeping records which that department may ask for as a means of determining the effectiveness of its dental health programs.

Many other means by which the private practitioner may help to improve public dental health will doubtless occur to you. Dentistry as a profession aims

at the reduction of dental disease and the correction of dental defects. All three aspects of a public dental health program, research, education, and dental care, are directed toward that goal, and the effectiveness of any program is measurable by an increasing trend toward good dental health in the total population. In seeking to realize this aim, the private practitioner and the public health dentist stand on common ground.

I think we all agree that dentistry has a logical place to fill in a national public health program. Public health dentistry is still young, still in the developmental stages; but a few outstanding requirements of a good public health program may be noted, and I have touched on each of these briefly. Public health dentistry should be based on the findings of scientific research, to the end that means may eventually be found for preventing dental disease. Public health dental programs should include education for all groups, such education being founded on factual information as determined by reliable research findings. The program should also include provision for dental treatments for the indigent and near indigent. A simple and practical system of keeping dental health records should form an integral part of

all public dental health programs. Finally, the measuring devices of an effective program should show, over a period of years, a progressive reduction in the number of teeth unnecessarily lost and a progressive increase in the number of persons receiving regular dental care.

The private practitioner owes to his community, to his profession, and to the public whatever support he can give to programs which aim at the improvement of dental health. Only through the whole-hearted co-operation of the health professions can we expect to realize the hope of the future; a national and international health program with dentistry as one of its major divisions.

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"The newer knowledge of nutrition is, I am convinced, the greatest advance in medical science since the days of Lister. When physicians, medical officers of health, and the lay public learn to apply the principles which this newer knowledge has to impart then will this knowledge do for medicine what asepsis has done for surgery."—McCarrison.

Conventions

EASTERN ONTARIO DENTAL CONVENTION, HOTEL MANITONNA, BROCKVILLE,
OCTOBER 18-19, 1942.

MIDWINTER MEETING OF CHICAGO DENTAL SOCIETY, PALMER HOUSE,
FEBRUARY 22-25, 1943.

Unusual Case of Dental Interest

by DR. GEORGE A. MORGAN, Toronto, Ontario

DENTICLES are described as teeth which are smaller than normal. Compound Composite Odontomes are defined as bundles or groups of definitely formed diminutive denticles, almost always occurring in the cuspid region, often misshapen and held together by either bone or masses of soft fibrous tissue.

The case as reported is that of a female, 35 years of age who presented herself

with a compound composite odontome containing twenty-three denticles, separated for the most part from each other by bone.

COMMENT:

This case is of unusual interest because of its large number of denticles and because of the number of permanent teeth impacted. It is therefore possible that denticles and bundles of diminutive teeth,

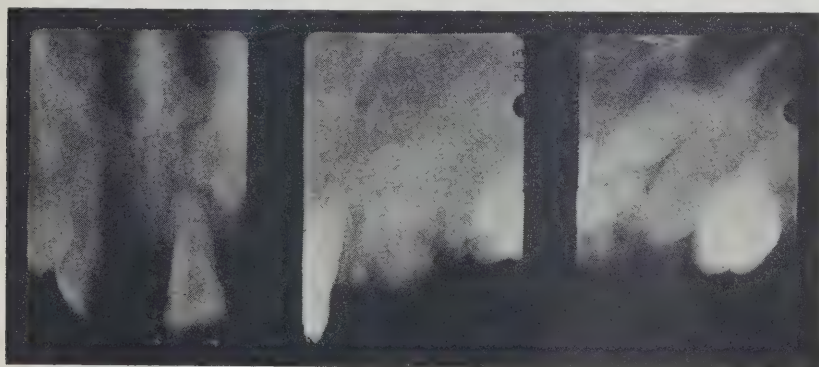


Figure 1
Roentgenological evidence of compound composite odontome.

complaining of pain in the left maxillary cuspid and bicuspid region. Clinical examination revealed a missing left maxillary first and second bicuspid, cuspid and lateral. Patient could give no history of previous removal of these missing teeth. There was no apparent bulging of either the buccal or lingual plates in this region and the area was not sore to ordinary pressure.

Roentgenological examination revealed as illustrated, a compound, composite odontome which had caused the impaction of the permanent lateral, cuspid and one other tooth, apparently a bicuspid. At operation it was found that this odont-



Figure 2
Post-operative x-ray of denticles and impacted teeth removed.

referred to as compound composite odontomes are manifestations of the hyper-productivity of the epithelial lamina, particularly in the cuspid region of the arch, and that they are typical forms of supernumerary structures associated with the development of the cuspid tooth.



Figure 3

Occlusal ray of compound composite odontome.



Figure 4

Post-operative occlusal ray of compound composite odontome.

From this and many other observed cases, it may be argued that denticles, supernumerary teeth and compound composite odontomes are an intermediate dentition laid down wherever observed, sometime between the deciduous and permanent dentition.

PERIODONTOLOGY IN DENTAL EDUCATION

"Operative and prosthetic procedures should be designed so that the teeth are stabilized, put into non-irritating function, and prevented from developing undue strains and stresses. A prosthetic appliance which causes or permits the teeth to be lost through its use is much more of a failure from a dental standpoint than a well-designed appliance of such poor workmanship or material that it breaks or wears out prematurely. The design of dental prosthetic appliances and to a considerable extent the shaping of dental restorations is a biological problem in the field of periodontology. The closest relationship should exist between the clinical divisions of oral diagnosis, periodontia, operative dentistry, and prosthetic dentistry.

A teaching institution in which oral diagnosis only notes dental defects, periodontia only cleans the teeth and teaches home care, operative dentistry only fills cavities, and prosthetic dentistry only replaces missing teeth with sturdy and beautiful bridges and dentures is inadequate no matter how good the technical teaching. The correlation of these subjects so as to lead in each case to the establishment and maintenance of health, function, comfort, and beauty is essential. The correlating factor is periodontology."—Excerpt from *Jour. of Periodontology*, by Harold J. Leonard.

"We distrust doctors not so much because we don't believe in them but because we are frightened they will stop us doing the little enjoyable things which help to make life worth living."—Christopher Quill.

Canadian Dental Hygiene Council

Report to

THE CANADIAN DENTAL ASSOCIATION*

I AM glad to report that marked progress has been achieved in public dental health work across Canada since the last meeting of the Canadian Dental Association. One outstanding evidence of this is the appointment of a dentist to the staff of the Provincial Department of Health in four of the provinces, and the appointment of one in a fifth province is anticipated in the next couple of months.

(In the province of Ontario there was already a Department of Dental Health when the Canadian Dental Hygiene Council was organized.)

The establishment of full time dental services in all Departments of Health has been one of the main objectives of our organization, and it is gratifying to know that definite progress can be recorded.

In British Columbia a dentist has been appointed a full time member of the staff of the Department of Health. He carries out the Dental Health program and during certain months of the year conducts dental clinics in certain areas of the province which are cut off from dental service.

In Manitoba a dentist has been appointed on a part time basis to the staff of the Provincial Department of Health. His task is supervising the Provincial Government dental clinics and directing the Dental Health policy.

In Nova Scotia a dentist has been appointed on full time service to the staff of the Department of Health; part of his time is devoted to operative treatment on the Dental Trailer, which is operated by the Provincial Department of Health. This program in Nova Scotia is a co-

operative one between the Department of Health and the Nova Scotia Dental Society, and receives substantial financial assistance from the Provincial Red Cross, two members of which sit on the dental clinic's administrative board.

In the province of Quebec the appointment of a full time dentist to the staff of the Department of Health is assured in the very near future.

Supervision and organization assistance have been given to the Dental Health program in every province during this past year, and we can definitely state that in each of these the program is being extended and is becoming more effective from year to year. This is more important than ever at the present time. Since our last annual meeting, dental health programs have been carried on in every province. The extent of these has varied from simply a program of public dental health addresses to Normal School teachers in training up to an intensive mouth health educational program embracing most of the province.

BRITISH COLUMBIA:

In British Columbia, with the splendid co-operation and leadership of the Deputy Minister of Health, there has been a gradual extension of the dental health program up to a point where there is an annual financial outlay by this Department of from \$13,000 to \$20,000. Dr. G. Amyot, the Deputy Minister of Health for British Columbia, fully realizes the importance of Dental Health in a modern General Health program, and the co-operation we have received from him is most gratifying. The official

* Report presented at Delegates' Meeting of the C.D.A., Toronto, May, 1942.

dental organizations within the province are ever ready to give him any assistance required.

ALBERTA:

In Alberta we are still encountering difficulties, and very little progress has been made since my last report. We can however, record some improvement. Dr. Bow, Deputy Minister of Health, has long been eager for a well rounded out dental program, and at my last interview with the Minister I found increasing interest. There are difficulties in this province which present obstacles, even to the Minister of Health, and we are looking forward to the day when they will be overcome.

SASKATCHEWAN:

Saskatchewan has always been, and still is, one of the leading provinces in its interest in Dental Health. Here we have a Minister of Health, Dr. Urich, and Deputy Minister of Health, Dr. Davidson, both of whom are Dental Health enthusiasts; Miss Ruby Simpson, Director of Public Health Nursing, who has engineered an extensive program of public health and has sufficiently enthused her nursing staff so that during the past few years a large part of their time has been devoted to public dental health programs. Added to this set-up we have had very splendid support from the dentists of the province, and the Dental Health program has produced very gratifying results.

MANITOBA:

In Manitoba I must pay tribute to the energy and activity of a group of dentists of the Manitoba Dental Association. While the expenditure of funds in this province has not been so great as in some of the others, their program has been an extensive one, and through the traveling clinics dental treatment has been carried to thousands of children each year. Financial grants from the Canadian

Dental Hygiene Council, the Manitoba Dental Association and the Provincial Dept. of Health have been used to finance this work.

ONTARIO:

In Ontario during the past year we have conducted an experimental program in rural districts. Working in conjunction with the Director of Dental Services of the Department of Health, the Department of Education, and the Central Committee representing the dentists of Ontario, a program of twelve meetings was conducted in rural communities of Simcoe, Ontario. This program was arranged, in the first instance by the Director of Community Life Training Institute, and in several communities the meetings were held under many sponsors, such as Farm Federation, Women's Institute and the Co-operative Group. These groups had been studying community health during the past winter and the establishment of rural dental school clinics was the main topic at our meetings. I consider this one of the most fruitful programs that we have taken part in for some time. The people in these rural districts evidenced a very intelligent and enthusiastic interest in Dental Health, and I think the keenness displayed at these meetings justifies the extension of this work in rural districts, so that we may take out into the country some of the educational and clinical advantages that have been enjoyed for many years by the children in the cities. Tangible results are already apparent from this particular effort, as several school districts have already voted the necessary authority to inaugurate dental services in their community for the public school children. I am deeply impressed with the importance of extending our program in rural areas.

QUEBEC:

During the past year we have been privileged to carry out a program in the

province of Quebec. At the present time there are forty-seven County Health Units throughout this province, serving fifty-seven municipal counties. These Units place at the disposal of the public the services of a staff, composed of a physician (public health graduate), nurses and sanitary inspector—to these now a dentist will be added,—who devote their time to the work of these County Health Units in a program of prevention and education exclusively.

In order to more completely round out this health service, the Quebec Department of Health has decided to establish in every County Health Unit a dental clinic. A number of these are already in operation, and the Provincial Department of Health, through its Deputy Minister, Dr. Gregoire, requested the Canadian Dental Hygiene Council to visit these various Units where dental clinics have already been established, for the purpose of observation, so that we might make recommendations and give assistance in co-ordinating the operative procedure adopted.

Following an itinerary arranged by the Provincial Department of Health, visits were made to a number of these, where a series of meetings had been arranged by the Medical Director of the Unit, to which he invited representatives of the local Public and Welfare organizations, as well as all of the dentists from the community. At these meetings the Health Educational objective of the dental clinics was discussed and the support and interest of the community was solicited.

The function of these County Health Units has been, and is, purely preventive and educational. No medical treatment whatever is given; cases requiring it are referred to the hospitals. However, in the establishment of dental clinics it is imperative that some treatment be given, because of the tremendous accumulation of decay and dental disease. Unhealthy

and unclean mouths must be taken care of; we must rid them of abscessed and diseased teeth before we can hope to make any impression through educational means. Therefore, while actually dental treatment is given in these clinics, every dental operation is for education, or health demonstration purposes only. Every child who comes to the clinic may have his toothache stopped, aching and abscessed teeth removed and his mouth cleaned up, but he is learning that through these operations he can chew his food without pain, that a healthy mouth and sound teeth bring greater comfort and happiness, and that clean teeth definitely improve his appearance, with the result that as soon as he is able to provide that service for himself, he will do so.

More than that, it is an education to the child's parents, his teacher, and all those with whom he comes in contact, because he is a happier, healthier boy by reason of this dental treatment.

I am glad to report that these new clinics established in the County Health Units are splendidly equipped, well located, and the dentists in charge are men who have the qualifications necessary for doing this particular type of children's work.

The treatment given in the clinics is entirely free and is limited to children of public school age, and only to those coming under a specified economic level. A chart is made by the dentist of each child patient's mouth, which is sent into the home, calling the attention of the parents to the importance and necessity of immediate treatment for the defective teeth. This chart has printed on it complete instructions as to the importance of diet, mouth care, and early treatment to prevent further decay. In many of the Counties all school children are examined and charted, but only those coming under the specified economic level receive full

treatment at the Unit Clinic. A dental health talk is given by the dentist in each school when the examination is completed.

While the Canadian Dental Hygiene Council program in Quebec was undertaken at the request of and under the auspices of the Provincial Department of Health, it was carried out with the co-operation of the College of Dental Surgeons of the Province of Quebec and its Public Dental Health Committee. Working in co-operation with them, our Council has provided material for new literature for distribution to public school children. This will be translated into French by the Public Dental Health Committee, and will be printed and distributed by the Provincial Department of Health. The Council also assisted in preparing new charts and forms for use in the clinics, and will prepare a syllabus outlining the duties of the dentist and the treatment to be given so as to bring about uniformity in all clinics.

NEW BRUNSWICK:

Very little public dental health work has been done in this province, except that each year a series of addresses on public dental health has been given to the teachers in training of the provincial Normal Schools. This program is organized by the Provincial Department of Health.

PRINCE EDWARD ISLAND:

In this province our program has consisted of the series of addresses to Normal School teachers in training. A program of travelling dental clinics is being carried out by the Provincial Department of Health, with some extension from year to year. School dental clinics established in Charlottetown and Summerside are showing progress.

NOVA SCOTIA:

In this province an energetic committee of dentists have applied themselves

to the public dental health program in co-operation with the Provincial Department of Health. The Provincial Department of Health has provided, equipped and maintained a travelling dental clinic (trailer) which has been operating for the last two years. This has been inadequate to take care of the demands for dental services, and money has been provided by the Government for a second trailer. This project, however, has been shelved on account of the war.

One problem of great concern to every province at the present time is the shortage of dentists, due to so many of our men enlisting in the Army Dental Corps. This is a very important matter which should be given serious consideration, and I am sure it will be given this consideration by the Canadian Dental Association. In certain sections of Canada there are many instances where for one or two hundred miles there is not a single dentist, where previously there have been from two to six. This is not only disastrous to the health of the people in these communities, but it is going to be equally disastrous to the profession of dentistry unless some attention is given to a correction of this condition. We leave this to the Canadian Dental Association.

The Canadian Dental Hygiene Council has continued to carry on a series of addresses to the teachers in training of all Normal Schools in six provinces of the Dominion. The resulting interest aroused through these addresses is almost overwhelming us. The demands made upon our Council for Public Dental Health Literature by school teachers has increased a hundred-fold. During the past year we have been forced to discontinue the sending of this literature to anyone other than those actively engaged in teaching.

In these terrible war days, when the need of man power and woman power is

so vital, we must not relax our efforts to promote better health—better health of our soldiers that they may carry on, better health of our civilians that they may endure. So the Canadian Dental Hygiene Council wishes to thank the Canadian Dental Association for its endorsement and co-operation, and also the various

provincial Dental Societies, their official organizations, and the special committees for their ever extending interest in the Public Dental Health programs of our organization.

Signed: HARRY S. THOMSON,
Field Secretary,
The Canadian Dental Hygiene Council.

Facing Tomorrow

MAN is not always a rational being. He constantly places obstacles in his pathway and then by difficult, circuitous routes attempts to avoid them.

Recently when passing through a rather oversized village with two dentists, I paid a visit to Dr. D., an acquaintance of many years. When leaving I inquired about his confrère, Dr. A. To my surprise, he replied: "I wouldn't know, you see he and I haven't spoken for nearly three years."

Now the other dental office is situated directly across the street and how difficult it must be for two men with the same interests, to practise in the same village and yet constantly avoid each other. The strain of keeping up the subterfuge must be terrific.

However, even that is not the worst feature of the situation, for the profession of dentistry in this whole area is judged by the action of these two members. The man at the service station told me the whole story briefly and somewhat tersely. I inquired of him if there was a good dentist in town. He replied that there were two dentists but they fought like two pups after the one bone and as a result they both lost what meat there was, for when most of the citizens desired dental service, they went over to Neighbourtown.

"Once upon a time there was a king who wished to capture a certain town. He summoned his Grand Vizier and ordered him to go in disguise as a pilgrim

to spy out the land. The Vizier went through the bazaars of this town to the shops which sold food. 'I wish to buy bread' he said. The shopkeeper said: 'Friend, my bread is stale but my neighbour has good, fresh bread.' He asked for olives. 'My olives are naught' cried the merchant, 'but my neighbour has olives that are fat and oily.' So the Grand Vizier returned to the King and he said 'O, King, we cannot conquer that town.'

"In ten years' time the King ordered his Grand Vizier to go again to this town. He went to buy bread in the Bazaar. 'My lord, I have the best bread, and no man in this town can equal the quality of my olives and my cheeses,' said the merchant, rubbing his hands together and bowing to the ground. 'Look around, my lord, what rubbish do you see in the other shops?' So the Grand Vizier returned to the King and he said: 'O, King, the time has now come for us to conquer that town because the people are no longer of one heart.'"

A profession to be respected by others must first be respected by its own members. No member can afford to let it become known that he distrusts his fellow without lowering the reputation of the whole profession in the estimation of the public. Dentistry will only be improved in position by dentists themselves. The public will never demand that dentistry should occupy a more elevated, professional status, than that set by the dentists themselves. NEDREW TELLUG

Report of Dental Health Committee*

EARLY in 1942 your Chairman opened negotiations with the Canadian Broadcasting Corporation with the object of stimulating public thought and dental education across Canada. After some time the Talk's Department offered time on a C.B.C. National network, March 14 and 21, at 5.45 p.m. E.D.S.T. With less than a month to prepare talks and get publicity on them, this offer was accepted. The titles of the talks were "Your Children's Teeth" and "Crooked Teeth".

The amount of time allowed by the C.B.C. to arrange such a broadcast does not allow for planned publicity and gives very little opportunity of notifying the profession through the Journal, which is the most economical way. However, when the time is donated it does not do to protest too strongly. Furthermore, your Chairman would like to state that some mild statements with regard to sweets and candy had to be greatly modified at five minutes to broadcasting time in order that they could not possibly offend commercial purchasers of service.

Several letters from various parts of Canada were forwarded. These requested further information for the most part and some desired reprints of the talks. Some inquiries I have since learned were not forwarded from the stations. Both talks were published in the Journal.

On April 7 at 7.45 to 8 p.m. E.D.S.T. from Toronto on C.B.L. and C.B.Y. and the C.B.C. National Network, Dr. Gordon Agnew of West China Union University at Chengtu was interviewed by the British author and journalist, Henry Peterson. This interview was arranged within ten days and was exceptionally fine.

The Canadian Broadcasting Corporation did not show any interest in my further suggestions inasmuch as it did not tie in with their propaganda for a national theme of war psychology. Miss Monica Mugan is a regular feature interviewer widely known in Central Ontario so I offered her a broadcast with two natives of India studying dentistry at that time in Toronto. Miss Canteen Walla of Bombay, a fourth year student, and her cousin Dr. Gin Walla, a graduate of Bombay and Post-Graduate of McGill studying further at Toronto. Miss Mugan put them both on the air May 29 at 5 p.m. E.D.S.T. over the C.B.C. National network. This was done very acceptably and aroused considerable interest in Ontario as we just had time to announce it at the Ontario Dental Association Convention meeting a few days before the broadcast. Dr. Garvin published this interview in the November issue of the Journal.

Major Ira W. Hamilton, President of the Ontario Dental Association was expected back from England to open the Convention program. I asked Mr. Morrison, head of the C.B.C. Talk's Department if he wanted him for their current program "Back from the Blitz". The Corporation jumped at this opportunity and even though Major Hamilton did not arrive in time and the broadcast had to be postponed on one week's notice until such time as he did finally arrive, six weeks later, nevertheless, they were profuse in their thanks. Major Hamilton gave an interesting, inspiring talk which was, I believe, very helpful to the public relations of the profession. This was broadcast July 8 at 9.30 p.m. E.D.S.T. over the National network from Ottawa,

* Condensed from Report presented at Delegates' Meeting of C.D.A., Toronto, Ontario, May, 1942.

and was published in the October issue of the Journal. Mr. Delafield, Supervisor of Talks, was interested in having an audition of Mr. A. E. Rowlett on his arrival from the American Dental Association Meeting in Texas. This broadcast was on November 22 over the National Network but unfortunately no script was kept.

I am satisfied that radio education is a very powerful aid and I would recommend that it be used at every opportunity. However, it is hardly possible to go into this avenue of education, giving dentists time to advise their patients of a particular broadcast (if they would) unless some money is provided. It takes a great deal of time to arrange for a broadcast, the publicity, the script, the timing, etc. even when one pays commercial rates. These things cost money and while the six broadcasts reported here cost you nothing, not even stenographic costs, it is not to be expected that a Committee can continue to arrange such activities.

In some of the hospital training schools for nurses the Superintendent, usually because of some contact with a forward looking public minded dentist, has instituted a series of dental lectures. Acting as Secretary of the Public Dental Health Committee of the Ontario Dental Association, I received a number of requests for suitable prepared lectures and illustrative material.

Before sending out the Outline of Lectures to you a number of copies were distributed to get suggestions and criticisms.

I had hoped that these lectures would be instigated in every Canadian School for nurses through the Nurses Association and that the dentists in each province would be asked for their help in appointing lecturers to each class through the local dental societies.

In the early part of this year the at-

tempt was made to work to the same end through the dental organizations. Again in March the men who represent the Canadian Dental Association in each province were asked their opinion of the Outline of Lectures, whether a library of material should be established or whether each province should set up its own method of assisting the lecturer. A tabulation of replies indicates that Saskatchewan says it is a provincial matter; in Nova Scotia the Chairman of an active Provincial Committee expects to establish the lectures shortly; in Alberta they have lectures in some schools and in Quebec there have apparently been some inquiries for material from the Faculty of Dentistry of McGill. It is the opinion in Manitoba that complete word for word lectures and material should be provided by the Canadian Dental Association and they will be ready to put these lectures in every training school as soon as this is provided.

If I interpret correctly, the President in Nova Scotia and the Chairman of this Board in Alberta, the President-Elect in Quebec and the Editor of The Journal believe a library might be useful.

During my term of office 83 communications have been handled and 15 enclosures and the Outline Material for Lectures. In closing this report may I add to my earlier recommendation that radio education be continued and expanded, the further recommendation that a library of educational material be made available when an office and paid assistance is provided. I believe money could be used with as good results here in Canada as in the American Dental Association. When a similar set up is established here there might be a greater degree of organization and co-operation follow from each Province.

Signed: A. E. HIGGINS, Chairman.

"The gods we worship write their names on our faces."—Walter L. O'Donnel.

The Forum

• CHRONIC FATIGUE

by E. J. KEPLER, M.D., M.S. in Medicine,
Division of Medicine, Mayo Clinic,
Rochester, Minn.

EVERY year a large number of patients¹ consult the Clinic because they are chronically tired. Most of them had been examined elsewhere and came to the Clinic because they were dissatisfied with either the diagnosis, the treatment or both. The condition, therefore, is worth serious consideration.

In the main, chronic fatigue is a disease of the intelligentsia. Its victims include doctors, lawyers, ministers of the gospel and their wives, nuns, artists, musicians, students, school teachers, big and little business men, executives and white collar workers in general.² Numb-skulls rarely are afflicted. People who use their muscles rather than their wits seem to escape, possibly because they expect to be tired. In any event, it is unusual for the day laborer or the charwoman to seek advice because of fatigue. Equally significant is the fact that patients having serious organic disease rarely mention fatigue as their outstanding or only complaint. There are, of course, a certain set of exceptions to this general principle, notably patients who have far advanced hypertension. Both youngsters and oldsters seem to be relatively immune. The greatest incidence is in early adult and middle life before recuperative powers are on the decline. Likewise, it is significant that some patients who were always tired during their earlier years feel better as they approach old age.

Usually the examination of patients who complain of chronic fatigue does not disclose anything significantly abnormal. The blood pressure may be slightly less than what is considered normal, slight hypochromic anemia may be present and, not infrequently, the basal metabolic rate is moderately depressed. On the whole, however, the results of examination are disappointing to the doctor because he is left without anything specific to treat and disappointing to the patient because a cause for his complaints has not been found.

The "cause" of chronic fatigue has changed about once every decade. Auto-intoxication, imbalance of the autonomic nervous system, focal infection and endocrine dysfunction, formerly were favoured as causative agents. More recently, avitaminosis and adrenal cortical insufficiency have come into vogue. This multiplicity of explanations is not surprising. Being primarily a sensation, chronic fatigue defies objective analysis. It cannot be measured nor has any concomitant abnormality been found as yet which can be measured. On this account chronic fatigue is particularly difficult to study with any degree of preciseness. At present it can be said safely that neither its aetiology nor its pathologic physiology is known. Furthermore, it is reasonably safe to assume that both will remain unknown until more precise methods have been developed for the study of the higher nervous centres in general and the intensity of various sensations in particular.

1. Exact statistical information on this point would be exceedingly difficult if not altogether impossible to obtain. A figure between 5 and 10 per cent would be a conservative estimate. The incidence of this complaint does not appear to change materially from year to year and this fact is of considerable significance.
2. The predilection for fatigue to occur among individuals of this type is admirably exemplified by the attention which has been devoted to the "T.B.M." (tired business man) in the lay press.

Certain features of chronic fatigue have considerable diagnostic significance and should be reckoned with in considering its aetiology. First of all, contrary to the pleasant sensation which follows moderate or even fairly severe muscular activity, chronic fatigue is decidedly disagreeable. Second, it does not appear to bear any relationship to the expenditure of any form of energy that can be measured. Characteristically, it occurs in the morning on arising and tends to disappear in the evening. It occurs whether the person does or does not do anything which in his opinion should make him tired. Frequently it is not relieved by rest or by sound sleep. Although accompanied by great disinclination to do anything, actual expenditure of energy in the form of physical exertion often relieves rather than intensifies it. Ultimately, it may become so incapacitating that the least effort becomes a burden. Actual muscle inefficiency may eventually develop because of muscular inactivity and loss of training.³ Finally, chronic fatigue often seems to follow periods of worry, uncertainty and other chronic unpleasant emotions. It usually is associated with lack of interest, mental depression, a sense of frustration, and resentment over the inability to accomplish as much as others do. When confronted with critical situations that demand action, these patients rally and display a remarkable amount of energy only to relapse again after the crisis has passed. These features, as well as the others which have been mentioned, strongly suggest that the entire symptom complex is psychologic rather than anatomic or metabolic and for the time being at least, it, in my opinion, had best be so regarded.

If one accepts this conception of chronic fatigue and then scrutinizes the

way many of us do, and have to, live, one is amazed not because some of us are tired out some of the time but because all of us are not tired out all of the time. For example, consider the increased number of impacts which modern means of communication make on our nervous system. The latter was designed for a machine whose top speed did not exceed 100 yards in ten seconds. The telephone, radio, automobile and airplane, however, have practically annihilated distance. The result is that in one day the higher nervous centres are bombarded with more stimuli than could be squeezed into an ordinary lifetime a century ago.

Other aspects of modern life are equally unhygienic. The human body is admirably fitted for success in a primitive struggle for primitive essentials. Life, under such circumstances, consists of hard physical work, simple troubles and simple pleasures. Its trials and tribulations are tangible. Disasters, when they occur, are concrete. Their cause is apparent. Fear is acute and leads to action. Today life is physically easy. Many of our difficulties and disasters consist of intangibles; more often than not, their causes are not apparent. Our fears are chronic and paralyzing. In short, our bodies are poorly adapted for the lives we lead and our way of life poorly adapted for the way our bodies are built. The result is chronic fatigue.

With each new cause of chronic fatigue a new and appropriate treatment has been advocated. A partial list of such therapeutic measures is most illuminating. It includes colonic irrigations, the use of drugs which stimulate or depress the autonomic nervous system, removal of foci of infection, administration of tonics and sedatives, of glycine, benzedrine, concentrated vitamins, adrenal cortical ex-

3. "Training" is here used in the sense employed by athletic coaches and does not imply the skill that is acquired by repetition.

tracts and other hormonal preparations. The results of the therapeutic efforts for chronic fatigue listed have, on the whole, been disappointing. This is not surprising. In fact, in view of the features of chronic fatigue which I have emphasized, it would be really remarkable if the results were otherwise.

The current tendency is to treat chronic fatigue with vitamins and with adrenal cortical substance. The inadequacy of this type of therapy is attested by the fact that it is most unusual these days to see a chronically tired patient at the Clinic who previously had not been treated with large doses of commercially prepared vitamins. If lack of vitamins were the essential aetiologic factor, such patients would have been cured and would not have found it necessary to consult the Clinic. In this respect the

greatly decreased incidence at the Clinic of such diseases as pernicious anemia, gonorrhea and others for which highly satisfactory treatment can be obtained readily at home stands out in sharp contrast. To a lesser extent, the same comment holds true for treatment with adrenal cortical substances.

If drug therapy is of little value, what can be done to help these patients? Actually, very little. Fortunately, most of them either get better or learn to live within their limitations. It helps matters for them if they can be convinced that they do not have any serious underlying disease. This, itself, is not always an easy matter, but it is nevertheless highly important. If the patient can learn to quit comparing himself with his more energetic associates (often a husband or another member of the family), he can

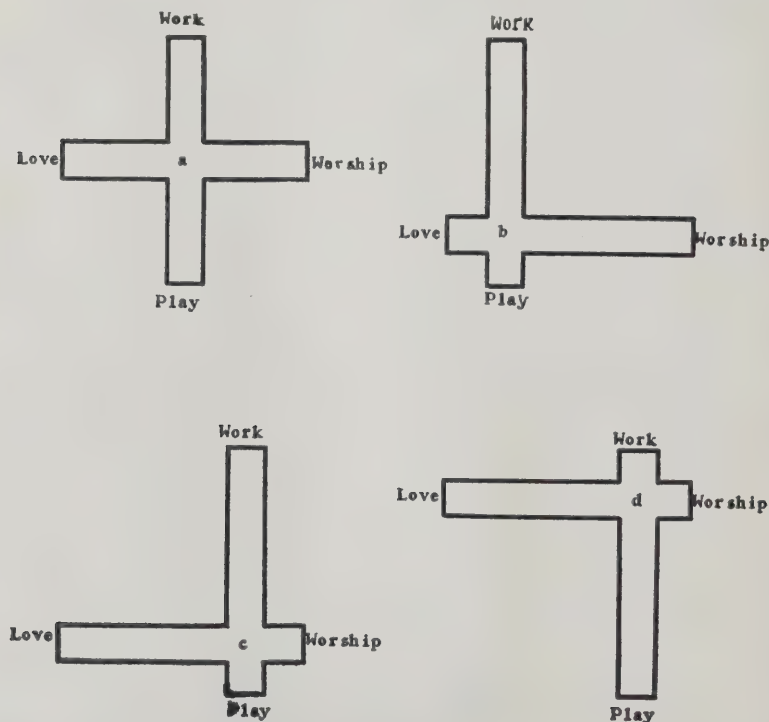


Figure 1

A, normal, full life; B, spinsters, school teachers and missionaries; C, some tired business men; and D, socialites, "playboys" and debutantes.

tolerate his disability better. Finally, specific situations can often be pointed out which may be responsible for chronic unhappiness and thereby be responsible for chronic exhaustion. In doing this the following scheme will be found useful. It is adapted and modified from the book, "What men live by," by Richard Cabot published in 1914. Cabot, in turn was indebted to Tolstoi for the title, to his wife for her helpful influence, to G. K. Chesterton, Josiah Royce, Ralph Waldo Emerson and to "so many others that no title page would hold their beloved names." The essence of the book is the cross which appears on its title page. The four terms at the arms of the cross namely work, worship, play and love, are used in a broad sense and with the realization that they often overlap. Although they are largely self-explanatory, it is necessary that they be qualified. Work, for example, should not be monotonous drudgery. It should satisfy the instinct of workmanship. For most people it is best that the fruit of labour be tangible and obvious. Play should be relaxation and not dissipation. Love implies a happy married life, a home and children; worship does not necessarily mean mere church going but the sincere devotion to something that is bigger than oneself. In the ideal life the four arms of the cross are reasonably equally divided; when they are not, unhappiness and fatigue result. A few typical examples are depicted in figure 1.

The average patient suffering from chronic fatigue is intelligent, even though he may not necessarily be educated. When presented with these diagrams and the diagram of his own life as it appears to the physician, he can comprehend the idea quickly. If he can correct the asymmetry of his own cross, he feels better. If he cannot, he usually acquires insight into his basic difficulties and musters his courage to cope with them.

—Reprinted by permission from the *Proceedings of the Staff Meetings of the Mayo Clinic*, June 3, 1942.

• FLUORINE AS IT RELATES TO CARIES

by W. D. ARMSTRONG, Ph.D., M.D.,
Laboratory of Dental Research
University of Minnesota, Minneapolis, Minn.
(Excerpts from paper in *North-West Dentistry*,
July, 1942)

RECENTLY, Dr. Rudolph Norvold carried out in my laboratory a well controlled study in which he demonstrated the positive effect of fluorine in reducing the initiation of rat molar caries under three conditions. These three conditions were: (1) when extra fluorine was supplied to the animals only during the stage of tooth formation, and before the animals were put on the caries producing diet; (2) when the extra fluorine was supplied to the animals concurrently with a caries-producing food; and (3) when the fluorine was given in high concentration in drinking water to mature rats for a period preceding, but not during the caries-producing regimen. The caries incidence was reduced by 15 per cent in the first group, 22 per cent in the second group, and 27 per cent in the third group.

What application of these principles can be made to the reduction of dental caries in the human? One obvious way would be to treat public water supplies with fluorine to the extent that the product should contain 1. p.p.m. of fluorine. Personally, I believe that this method can be employed with safety if carried out under rigid control. However, it is recognized that the water intake by individuals varies and that the water intake in warmer climates is higher than in the cooler climates. There is some risk, then, that the addition of fluorine to communal water supplies would cause toxic results, not the least of which is the production of unesthetic mottled enamel.

Furthermore, any benefit to be derived from this procedure would accrue only to those persons who used the high fluoride water during the time of the formation of their teeth.

An accidental observation which we made in connection with another investigation has indicated that the fluorine content of the enamel of fully formed, erupted teeth can be increased by the relatively brief application of fairly strong solution of sodium fluoride to the teeth. The evidence which we have at hand indicates that the topical application of fluoride solutions to the teeth would be an entirely safe procedure if carried out in a systematic manner by dental practitioners. It remains to be demonstrated, however, whether fluorine introduced into the teeth in this manner is effective in reducing the caries susceptibility of the teeth. This effect can be demonstrated only by a well-controlled experiment employing children as the subjects. Dr. John Knutson and I are attempting to make arrangements to carry out this study, and we hope to locate a sufficiently large population of children who would be suitable for the investigation.

• EFFECT OF SODIUM SULPHATHIAZOLE ON NASAL MUCOSA

THE A.M.A. Journal for May 2, 1942 contains a series of studies on the caustic effect of sodium sulphathiazole on rabbits by Futch, Rosenvold and Stewart of Los Angeles.

Sodium sulphathiazole in 5 to 30 per cent concentration was applied to the nasal mucous membrane of rabbits.

The studies would indicate that a five per cent solution of sulphathiazole sodium sesquihydrate is injurious to the nasal mucous membrane of rabbits. The

high degree of alkalinity of the solution may be a factor in causing the mucosal damage noted in these experiments. Fabricant has recently found that the normal pH of human nasal secretions is in the acid range.

Literature advertising the use of 5% sodium sulphathiazole states that this solution is isotonic, which may be misleading to those who interpret the term isotonic as meaning non-irritant. Non-irritant chemical combinations of the sulphonamides may be possible and prove useful in the future.—*N.Y. Jour. of Dentistry*.

• ACRYLICS IN DENTISTRY

by PERLEY J. LESSARD, D.D.S., Portland, Maine.
(*Conclusions of paper in Dental Items of Interest, March, 1942.*)

THE resiliency of acrylic resin, occasioned by its elasticity, may add strength to the material but it is a drawback as far as restorative dentistry is concerned. Unless the preparations of the teeth are ideal, the resilient property of the finished case (especially under pressure) will break the cement line and restorations will become loosened. Therefore, I should say that acrylics are contraindicated in shoulderless jacket crowns and full M.O.D. inlays.

One of the great faults of operators who use acrylics in operative dentistry is that they expect miracles. These men are due for a sad disillusionment. Acrylics have their limitations. It takes as much care and skill to make a fine acrylic restoration as it does any other. Acrylics have a definite place in dentistry. Their use is very diversified, and in the hands of our alert research workers their future holds unlimited possibilities. They are now in their infancy. Time alone will render the verdict of their true worth.

"Dull and morose people seldom resist disease as easily as those with a cheerful disposition," says a medical writer. The surly bird catches the germ.—The Humorist.

• A BASE METAL ALLOY SUBSTITUTE FOR DENTAL INLAY CASTING GOLDS

by HOWARD K. WORNER, M.Sc., (Melb.)
Research Fellow, National Health and Medical
Research Council of Australia.

(Excerpt from *Australian Journal of Dentistry*,
December, 1941.)

PRIOR to the war, a considerable quantity of research was performed in this laboratory on base metal substitutes for gold suitable for use in various branches of dentistry. In response to a number of requests from both practising dentists and depots supplying dental materials, it has been decided to publish in this note some information concerning one alloy which was developed for use in the conservative sections of the College and Hospital with which this laboratory is associated.

A good average composition, and the one, incidentally, which is generally made up for use in the institutions above-mentioned, is:—

Copper	52.5%
Zinc	46.0%
Aluminium	1.5%

For the benefit of those who may desire to prepare this alloy from the pure metals, it should be pointed out that it is best to melt the copper first and add the aluminium and zinc in that order. Great care has to be taken in the addition of the last component in order that loss by oxidation will be prevented. This takes place with extreme rapidity when zinc is freely exposed to the air at temperatures in the vicinity of the melting point of copper (1083°C., 1981°F.). Because of the lowering of the melting range as the zinc content of the alloy increases, it is a good point to turn off the supply of gas, oil or electricity to the furnace, as soon as the additions of zinc are commenced. Besides allowing the temperature to decrease, with consequent less likelihood of zinc losses, the additions are easier to make when the furnace is not belching forth flame and fumes. Prior to pouring,

the alloy should be stirred with a carbon rod, or other material which will not react with the alloy. The material is easily granulated by holding the crucible close to the surface of cold water filling a bucket, and pouring the metal slowly.

In regard to melting and casting, this alloy is quite easy to melt in the gas-air blowpipe flame. The oxide coating makes the molten alloy appear sluggish when compared with gold alloys. The best means of controlling or minimizing oxidation is to keep the point of a hardwood stick in contact with the alloy during melting. The stick can also be used as a stirrer, enabling the operator to tell when all the alloy in the crucible of the casting machine is molten. As soon as this is so, the cast should be made. Invariably, it has been found that the best inlays or crowns, from the point of view of fit, freedom from pitting, tarnish resistance, etc., are those which have been heated quickly and cast as soon as it is evident that melting has occurred.

• THE USE OF ASCORBIC ACID (VITAMIN C) IN THE TREATMENT OF TOOTH EXTRACTION WOUNDS

by H. GORDON CAMPBELL, L.R.C.P., L.R.C.S.,
L.D.S., Professor of Dental Surgery, and
ROBERT P. COOK, B.Sc., Ph.D., D.Sc.,
Lecturer in Biochemistry.

From the Dundee Dental Hospital and the Department
of Physiology, University College, Dundee, University
of St. Andrews.

(Condensed from *British Dental Journal*, Jan. 1, 1942.)

MUCH evidence is now available that ascorbic acid plays an important role in wound healing. It seemed to us from the rapid healing obtained in cases of gingivitis treated with ascorbic acid that the wounds following tooth extractions would be a good subject for the possible use of this vitamin. Ascorbic acid was given orally prior to, and subsequent to, the extractions, in the hope that it would assist the reparative process. The results obtained by its use in the first case were so dramatic that it was decided to apply this method to more cases to verify

them. The most striking features of the treatment were the rapid healing of the gum tissue and, what impressed us even more, the rapid absorption of the alveolar bone margins.

If an immediate extraction is necessary at least 300 mgm. or preferably 500 mgm. should be given before the extraction. This should be followed by a similar dose on the same day. On each of the following three days 300 mgm. should be given and continued until a urine test shows that the patient is "saturated". Thereafter a maintenance dose of 100 mgm. daily should be given until the reparative process is complete.

The total extra cost for 2,000 mgm. of ascorbic acid is about 2s. 6d.

In four cases we have found that the giving of a large dose (500 mgm.) of ascorbic acid to patients not previously treated with the vitamin, who showed persisting bleeding after tooth extractions, has a very marked effect in stopping the haemorrhage. The effect is often very rapid and it is hard to understand if we regard ascorbic acid as being concerned solely with collagen formation. This subject is being studied further.

• ENDOCRINE THERAPY IN DENTISTRY

by ISAAC SCHOUR, D.D.S., Ph.D., Department of Histology, University of Illinois, College of Dentistry.

THE role of the endocrines in the production of dental disease is not as yet definitely established. For the most part, statements in the literature which relate endocrine dysfunctions as etiologic agents in dental diseases are not supported by substantial clinical or experimental evidence.

Investigation of a number of patients in this institution suffering from known endocrine dysfunctions reveals certain dental symptoms which can be associated with the endocrine dysfunction. These are: (a) retarded eruption of the teeth, (b) disturbed growth of the bony jaws,

and (c) periodontal disturbances. Since disturbances in tooth formation or calcification can occur during early tooth development (infancy and early childhood) it is theoretically possible that cases of early (congenital) endocrine dysfunction should show such disturbances. Actually, however, disturbances in tooth formation or calcification are rare even in congenital cretinism. Abnormal eruption of the teeth and growth of the jaws can and do occur only in the child. However, both types of disturbance can be associated more frequently with non-endocrine than with endocrine cases.

On the other hand, whenever abnormal tooth formation or calcification, periodontal disease, disturbed eruption of the teeth or growth of the jaws, or caries is investigated in the dental clinic, endocrine dysfunction can rarely if ever be proved. There are many factors, both local and systematic, other than endocrine dysfunction that are more usually associated with dental disease.

When the relationship between endocrine dysfunction and periodontal disease can be established, as in uncontrolled diabetes, untreated hypo- or hyperthyroidism, or hypo- or hyperpituitarism, such relationship does not occur in more than 65% of the cases studied, or no more than in any non-endocrine group. The procedure in such cases is the treatment of the disease as well as the specific treatment of the dental condition. It would be foolish to cure a periodontal disturbance (if this were possible) in an active diabetic or cretin without also treating the endocrine dysfunction.

However, on the basis of our present knowledge, there is no indication for the prescription of endocrine therapy by the dentist; the physician should treat the endocrine dysfunction and the dentist the dental disorder.—*From Committee on Co-operation, American Assoc. of Dental Editors.*

• FLOUR AND BREAD

by A. LINTON DAVIDSON, Dominion Analyst,
Department of Pensions and National Health,
Ottawa.

(Condensed from *National Health Review*,
April, 1942)

IT IS well known now that an acute deficiency of vitamin B₁ or thiamin will produce the disease, beri-beri, common in the Orient, but practically unknown in the Western World. It is also believed in some circles that a slight deficiency in the diet in the course of years, is likely to result in gastric and intestinal disturbances, neurological ailments and other symptoms which may lead in the long run to stunted growth, poor physique and general deterioration in health. Calcium and phosphorus are required in significant amounts each day for the development and maintenance of normal bones and teeth, while a shortage of iron in the daily food leads to anaemia and chlorosis. Nutritionists, therefore, are beginning to see clearly that if malnutrition, so far as thiamin is concerned, is to be met and overcome, something will have to be done about the quality of white flour used by the general public.

Two methods have been suggested: (1) Fortification, and (2) Retention.

(1) Fortification. This may be done in one or two ways. (a) Pure synthetic thiamin may be added to white flour to replace what has been lost in milling. This method has already been adopted by the British Government.

A similar policy has been pursued in the United States where tentative standards have been established for an "enriched flour."

The chief objection to such procedures is a nutritional one. In the comparative analysis of stone-ground flour and roller milled flour, it will be noted that the latter contains besides a shortage of thiamin, shortages of riboflavin, carotene and minerals as compared with the stone-ground variety. All these substances are

essential in metabolism.

The second method of fortification is applied to bread and not to flour. It is the use of a high-vitamin yeast which is being increasingly employed by Canadian bakers.

Both these methods are inadequate and tend to increase the cost to the consumer. In fact the Government of Canada considers the addition of synthetic vitamins to flour and bread as an adulteration. The third method should not increase the cost of bread.

(2) Retention. This method harks back to the old days of the grist mill which gave an 80 per cent extraction of the wheat berry. It is being advocated by eminent cerealists and nutritionists in Canada. We know now, and the expert laboratory workers of the milling industry are satisfied, that it is possible to produce a white flour in Canada which retains all of the factors of the Vitamin B complex occurring in the wheat. This is made possible by the new high milling extraction methods.

These considerations have led the Dominion Government to make provision for the marketing of two types of flour and bread retaining all the factors of the Vitamin B complex occurring in the wheat and carrying the Dominion Government's designation of approval.

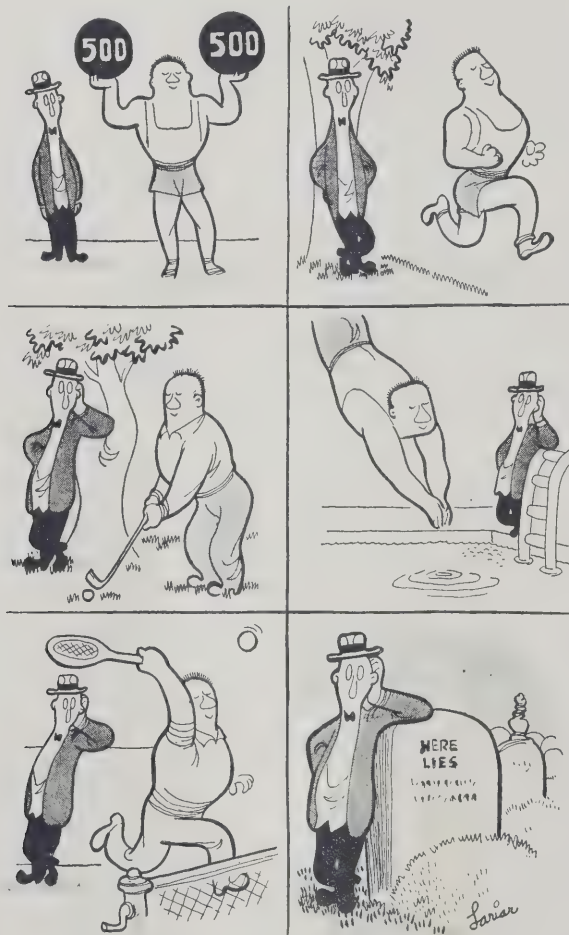
The new regulations define the composition of bread as well as the two vitamin varieties of bread and thus prevent the addition of synthetic vitamins and other chemicals to a product marketed under the name of bread.

The new regulations provide for two types of Vitamin B flour and Vitamin B bread; one, a white flour and a white bread; the other, a flour and bread other than white. These latter, Vitamin B flour (Canada Approved) and Vitamin B bread (Canada Approved), are required to contain a higher percentage of the Vitamin B group. This is intended to

protect the consumer against the suggestion that a white bread is better nutritionally than a dark bread. It is also a protection for the millers and bakers producing and distributing higher extraction non-white flour and bread.

It should be noted that not only is the use of synthetic vitamins prohibited but, in addition, no claim may be made in connection with any bread which has been fortified by the use of high vitamin yeast.

DRAW YOUR OWN CONCLUSIONS



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"Every man casts two shadows: one the shadow of the outward man, which you may see upon the sidewalk as he passes in the sun; the other, the shadow of the inner man, the reflection of his accomplishments and his ideals."



PRINCE EDWARD ISLAND



Editor—M. H. GARVIN, Winnipeg

SASKATCHEWAN



A S S O C I A T E E D I T O R S

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ONTARIO



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F. C. Harwood, Moose Jaw

NOVA SCOTIA



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MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



H. M. Cline, Vancouver

Health Insurance

In the last issue of this Journal there appeared a statement of the Principles, as affecting Dentistry, to be followed in setting up any form of National Health Insurance in Canada, as adopted by the Canadian Dental Association in session at Toronto last May.

One of these principles needs to be emphasized again and again until finally adopted by the government of Canada and this is that the childhood period is the most feasible and economical time in the life of the individual when control of dental disease can be put into effect and that the only method of properly attacking the problem of dental disease is through the child.

In his splendid paper appearing in this issue of the Journal Dr. Vern Irwin, Dental Health Director in Minnesota, arrives at this same conclusion. Succinctly he points out that in Canada each dentist, even in normal times, would need to work 58 hours a week and 50 weeks a year if he were to give each of his 2,900 potential patients even one hour a year of his services. It is obvious that the accumulated dental defects of adults could not be cared for by the present dental personnel even if funds were available.

Dr. Irwin therefore states that any dental health program, designed for future generations, must be limited in scope, that dental care should be started

at two years of age and no defects allowed to accumulate as it costs from three to twenty times as much to replace a lost tooth as it does to fill a cavity. Dr. Thomas Parran, Surgeon General of the United States Public Health Service, is quoted as saying, "We can do the best job under our present knowledge of preventive dentistry by taking care of the annual crop of new dental defects which appear in grade school children."

In the July 1, 1942, issue of the British Dental Journal the editor says:

"It is clear that, even if people would avail themselves fully of any new facilities for treatment, the number of dentists in the register is altogether insufficient to give full protective service to them all. Such a service can only be developed gradually, and it is of the highest importance that the main effort should be concentrated on the younger age groups in the hope that the coming generation can be educated to seek continuous, conservative treatment throughout life."

When we remember that a certain form of dental health insurance has been in force in Great Britain for many years, and that the British dentist has had a wide experience in dealing with such problems these statements from the editor of their official publication come to us with great force.

It seems obvious that the only right thing to do is to begin with the child and in a relatively few years we will have produced a race whose dental needs can be met with reasonable expenditure of time and money.

We, as dentists, must equip ourselves to do proper children's dentistry and like it. We must develop a sound educational program. We must place the emphasis on health, personal appearance, personality and the necessity of having a fine complement of teeth if one is not to be handicapped in one's business and social career. We must seek the co-operation of all interested parties and organizations. We must distribute wider the dental story, told in an attractive and effective way. We must make research a vital part of our program as the need must be curtailed for the type of dental service, which we render chiefly at present.

If this program is to be carried out in the efficient way its importance demands it must be under the control of the dental profession. To make this plan a political football would spell disaster from the very start. So let us work together towards the consummation of the principles already agreed upon by us as members of the Canadian Dental Association.

Deferment of Dentists and Technicians

It goes without saying that our splendid Dental Corps must be supplied with the necessary personnel but a serious condition is arising in many parts of Canada due to dentists and dental technicians being called into Active Service. With proper planning surely there is some way by which the Corps will receive the necessary support and at the same time the civilian population will not suffer unduly.

In the west, particularly, it is well known that there are very large areas with no dentists at all. In Manitoba 26% of the dentists have enlisted. In Saskatchewan 28% have done the same. In Alberta almost 35% have joined the armed forces. In the City of Calgary with a population of between 85,000 and 90,000 and with a huge adjacent rural district there are only 29 dentists left. In this same City also a large number of skilled dental technicians have entered the Army and other men are on call, and service to the public will be seriously curtailed if the present tendency continues.

In Britain dentists are placed where they can render the best service. Technicians who are considered essential to the continued, efficient conduct of the practice are entitled to appeal for deferment of calling up. In the United States the services of dentists and technicians have been listed as essential activities by the Selective Service Board. Under date of July 23, 1942, the following interpretation of this subject was given out from the office of the Chief Dental Officer of the Selective Service System in Washington: "It is the considered opinion of this (national) Headquarters that qualified dental technicians should receive serious consideration by the local board for deferment as necessary men, and that a sufficient number of employees should be permitted to be retained by dental laboratories in order that dentists serving the civilian population may have the proper assistance in processing prosthetic dental appliances." Surely this is as it should be as a trained technician can render the most efficient service to his country, in many cases, by working faithfully where he is already located. Of course the armed forces should have priorities over the man-power of Canada but in calling up both dentists and technicians for service recognition should be given to the war production industries and the essential civilian activities as well as to the armed forces. Dentists and technicians will co-operate whole-heartedly in carrying out such a policy.

In the United States there are 3,421 dental laboratories; 12,320 technicians, and 3,080 employees, not technicians. More than 80 per cent of these technicians come within the draft age (18-44) and an estimated 25 per cent are not married. There is no surplus of labour and it takes 4 to 8 years to develop a good technician whose work includes surveying, designing, carving, grinding, setting-up, waxing, packing, finishing, soldering, casting, etc. Conditions are no doubt similar in this country. Furthermore, because of the attractive positions open in other industries, it is now difficult to obtain apprentices for dental laboratories.

In Canada there is no exemption for any class of personnel, at the time of writing. Likewise there is no National Draft Board. There are, however, Regional Boards which are supreme in their respective districts.

We are advised that the War Services Board in Alberta is so concerned over the depletion of the dental personnel in that Province that in future all technicians who wish to enlist or are drafted will not be accepted until endorsed by the Dental Board of Alberta. In other words their enlistment will be deferred.

The Alberta War Services Board is also of the opinion that no more dentists should be permitted to join the Dental Corps from that province at present due to the disproportionate enlistment and suggests that the Canadian Dental Association should appoint an Assignment and Procurement Committee which would pass on all applicants for the Dental Corps, and decide whether they are essential to civilian services, and if so the War Services Board will refuse to either let them enlist or be drafted. At the time of writing the officers of the Canadian Dental Association are considering this problem and it is to be hoped that the matter will be taken up immediately with the Director of Dental Services and a Committee on Assignment and Procurement appointed, which Committee will co-operate with the various War Services Boards and Provincial Dental Boards in Canada, in the interest of our war effort.

CORRESPONDENCE

To the Editor, Journal of C.D.A.:

As a result of the war situation and the registration of man-power, we are facing a very serious situation in Calgary. As you are aware, there are not sufficient dentists in this area to do the necessary civilian dental practice. The number of our dental technicians is so depleted that it is difficult to have laboratory work done.

This situation is particularly acute here because voluntary enlistment has been on a greater scale than elsewhere.

Alberta has a population of 750,000 people. Before the war there were thirty senior technicians. There are now twenty and of these, three are on call under the man-power registration scheme. Of these, two have been called up and have been deferred until October.

Before the war there were sixteen senior technicians in Calgary. There are now eight. Two of these were called up and deferred until October and one is under forty and unmarried.

It is obvious that if these three men are called up there will not be sufficient technicians to do the work for the limited number of dentists remaining. Such a situation would be harmful to the health of this community and surrounding district.

In the United States the Selective Service System has listed among essential activities "dental and medical laboratories." The Chief Dental Officer of the Selective Service System in Washington made the following statement:

"It is the considered opinion of this (national) headquarters that qualified dental technicians should receive serious consideration by the local board for deferment as necessary men,

and that a sufficient number of employees should be permitted to be retained by dental laboratories in order that dentists serving the civilian population may have the proper assistance in processing prosthetic dental appliances."

I am sending you this information with a copy to Dr. Rooney, who I believe is taking up the matter for the Canadian Dental Association.

Calgary, Alberta,

August 24, 1942.

Signed: JOHN W. CLAY.

September 5, 1942

To the Editor, Journal of the C.D.A.

In the August issue of The Journal of the Canadian Dental Association may be found one of the most thought-provoking articles on the present status of the profession of dentistry it has been my privilege to read. I refer to the Presidential address delivered on the occasion of the May meeting of the Canadian Dental Association. It has been my good fortune to have been intimately associated with Doctor Woodbury for a period of thirty years or more and I am naturally somewhat familiar with the pattern of his thought processes. It was pleasurable indeed to find his observations and deductions so logically arranged and so delightfully set forth.

I write this to draw attention to the keen discrimination displayed in his analysis, and the precision of thought employed in illuminating the problems now confronting us. In my opinion, the address is well worth studying.

Signed: A. W. Faulkner, Halifax.

BOOK REVIEW

A Manual for the Differential Diagnosis

of Oral Lesions, by Joseph L. Bernier, D.D.S., M.S.; Major, Dental Corps, U.S. Army; Curator, Dental Division, Army Medical Museum; Secretary and Pathologist to the Registry of Dental and Oral Pathology of the American Dental Association; Chief of the Oral Pathology Section in the Department of Preventive Medicine and Clinical Pathology, Army Dental School, Army Medical Centre, Washington, D.C. 228 pages with 174 text illustrations and 1 colour plate. Published by the C. V. Mosby Co., 1942. Canadian agents, McAinsh & Co., Limited, Toronto, Ontario. Price \$4.75.

The purpose of this Manual is to provide a handy reference to the pathology and to the clinical features of certain oral diseases. Emphasis has been placed on those affections which seem to occur more frequently in general practice.

The first chapter deals with the indications and technique for the biopsy, a procedure with

which every dentist should be very familiar. Other chapters deal with Histology, Inflammation, Superficial Lesions, Benign Tumours, Malignant Tumours and Tumours of Odontogenic Origin, Cysts, and Miscellaneous diseases. There are 234 references given so that any reader can readily look up other opinions if he so desires.

The large number of photomicrographs would be of more interest to the pathologist or to the dentist who devotes some time to microscopic studies than they would be to the average dentist, however, the clinical pictures would be quite valuable to any dentist. General statements as to treatment are given but no attempt has been made to cover this phase in detail.

It is becoming increasingly important for the dentist to develop a keener interest in the basic sciences of his profession. This book should help him obtain a greater knowledge of the pathology of his particular field of endeavour.

DENTAL CORPS NEWS

Lieut.-Colonel Carroll

Lieut.-Colonel R. E. Carroll, E.D., has recently been promoted to command a dental company Overseas.

He was appointed as a Dental Officer in No. 22 Coy., Canadian Dental Corps, Toronto, in 1939, and received his promotions overseas.





Lieut.-Colonel Edgecombe

Lieut.-Colonel J. F. Edgecombe has been appointed recently as Assistant Director of Dental Services, Army H.Q. Overseas.

He was appointed District Dental Officer of Military District No. 7 in 1939 and later was appointed Officer commanding an overseas dental company.



Major H. E. Halpin

Major H. E. Halpin, who has recently been promoted from the rank of Captain, is the officer in charge of the dental clinic at Currie Barracks, serviced by No. 33 Coy., C.D.C. at Calgary.

Major Halpin received his education at the University of Alberta and McGill University.

He received his commission in the Canadian Dental Corps in November, 1939. Previous to this time he had been practising dentistry at Rimbey, Alberta.

During the last war, Major Halpin served with the Winnipeg Grenadiers from 1915 to 1919.

Major Pierre R. LaSalle

Major Pierre R. LaSalle of No. 24 Coy. C.D.C., C.A. (A) a well known Montreal dentist was recently promoted to Acting Major.

He was commissioned to the Canadian Dental Corps, as Lieutenant in October 1939 and promoted to Captain's rank in January 1940.

In May of 1940 Major LaSalle was attached to No. 14 Canadian General Hospital R.C.A.M.C. as Officer in charge of Dental Clinic for that Unit. He proceeded with the same Unit to England in June 1941, and returned to Canada in May 1942.

Major LaSalle attended Mont St. Louis College and Ste. Therèse College, and was graduated from the Université de Montréal, Faculty of Dentistry, in 1925.

Before enlistment Major LaSalle was Assistant Professor of Prosthetic Dentistry at l'Université de Montréal, Dental Clinician at Notre-Dame Hospital, Governor of the College of Dental Surgeons of the Province of Quebec, Member of the Executive Committee of said College, President of La Société d'Hygiène Dentaire de Québec, and Vice-Président of La Société Dentaire de Montréal.



Photo by Blank & Stoller

Major J. D. Johnson

Major J. D. Johnson, who has recently been promoted from the rank of Captain is the officer in charge of the Dental Clinic at Gordon Head, B.C.

Major Johnson practised dentistry in Victoria for a number of years. He was appointed to the Canadian Dental Corps in 1939 with the rank of Lieutenant and he was promoted to Captain in 1940.





Photo by Blank & Stoller Ltd.

2nd/Lieut. Pearson

2nd/Lieut. Harry O. Pearson was born in Lynn, Mass., U.S.A., on the 10th August, 1902. He served in the great war in England and France with the 14th Infantry Regiment U.S. Army from August 1917 to July 1919.

He also served with the U.S. Navy at the Canal Zone, Panama, from 1923 to 1924.

2nd/Lieut. Pearson successfully completed a Quartermaster course, at the Canadian School of Army Administration, St. Johns, Que., in December 1941. He was commissioned 2nd/Lieutenant, and appointed Quartermaster of No. 24 Coy. C.D.C., C.A., in May 1942.

2nd/Lieut. Pearson qualified as a Lieutenant at the O.T.C. (W) Gordonhead, B.C. He is an accountant by profession.

He has two sons with the U.S. Navy; one was serving at Pearl Harbour during the attack in December, 1941.



2nd Lieut. H. Doncaster

2nd Lieut. H. Doncaster, who has recently been commissioned in the Canadian Dental Corps, enlisted as a private in July, 1940. He was posted to C.D.C. Headquarters at Ottawa, and except for the period spent at O.T.C., Brockville, has been stationed there ever since.

2nd Lieut. Doncaster's home is in Toronto. He was employed for nine years in the Head Office of the Canadian General Electric Co., and for twelve years prior to enlistment, conducted his own duplicating business in Toronto.

During the last War, he served overseas with the Divisional Signal Company as a Sgt. Instructor. For a number of years he was Secretary-Treasurer of the overseas Signals Association.

NEWS FROM THE PROVINCES

BRITISH COLUMBIA:

College of Dental Surgeons of British Columbia

The three British Columbia students who graduated from North Pacific college, passed the examinations and registered in British Columbia have joined the Canadian Dental Corps.

ALBERTA:

Dental Assistants' Association

The Calgary Dental Assistants' Association held its first meeting of the season on September 14, with twelve members present. Refreshment were served by Miss Vera White and Miss Gwen Hilliard. Following a discussion, the President, Miss Vera White, made a small presentation to Miss Margaret Auld, a November bride-elect.

J. P. Locke, Convener.

SASKATCHEWAN:

Dental Corps Enlistments

Quite a number of Saskatchewan dentists have recently enlisted in the Canadian Dental Corps, bringing the number of dental officers on active service from the Province, to seventy, with slightly less than two hundred and fifty on the active Register. This number represents a very large percentage of enlistments.

Dr. Wyatt Moves to Moose Jaw

Dr. R. E. Wyatt, recently of Kelliher, Saskatchewan, has moved to Moose Jaw, where he is establishing a practice. The members of the Moose Jaw Dental Society welcome Dr. Wyatt as a confrère, and wish him success.

ONTARIO:

Important Change in Dentistry Act of Ontario

The secretary of the Board of the Royal College of Dental Surgeons has recently pointed out the significance of Section 20 of the Dentistry Act which relates to penalties for practising without a license. Two clauses of interest to every Ontario dentist follow from Section 20, sub. Section 1, Clause c—

"No person who is not a member of the College shall, by himself or by any other person, make, produce, reproduce, construct, furnish, supply, alter or repair any prosthetic denture, bridge, appliance or thing to replace, improve or supplement any human tooth, or to prevent, alleviate, correct or improve any condition in the oral cavity, or to be used in, upon or in connection with any human tooth, jaw or associated structure or tissue, or in the treatment of any condition thereof, or give any advice or assistance in connection therewith, *except on the prescription or instructions of a member of the College* and, where the use of a design, impression or cast furnished by a member of the College with such prescription or instructions."

Also Clause 1a—"It shall be the duty of every member of the College to furnish to the dental technician or other person instructed by him to undertake or perform any work or service or give any advice or assistance described above a written prescription therefore signed by such member, and where necessary, a design, impression or cast, at the time of giving such prescription or instructions."

The import of these clauses are—

1. No one but a qualified licensed dentist in good standing may make any prosthetic appliance whatsoever except on the prescription setting out the instructions signed by the dentist.

2. It is consequently the necessary duty of every dentist seeking the services of a dental technician to perform certain duties for him to give instructions set out in a proper prescription.

3. It would seem that penalties which are imposed for irregular practice of dentistry by those who are unqualified would apply to the dentist who fails to give proper instructions to his dental laboratory as set forth in the Act.

The Board of the Royal College of Dental Surgeons has circularized every dentist in Ontario indicating a suggested proper prescription form to be used for writing instructions to the dental technician. In casual conversation one learns that instructions are often given by telephone; this method is now illegal and dentists are urged to provide themselves with prescription books as soon as possible.

Further information may be secured from the secretary of the Royal College of Dental Surgeons.

Workmen's Compensation Board of Ontario

In these days of increased industrial activity dentists are frequently called upon to attend workers who have received dental injuries in an accident. In many such cases these workmen look to the Workmen's Compensation Board to be responsible for proper care. With this in view the procedure to be followed by a dentist called on to render dental service to a claimant of the Compensation Board might be interesting.

1. The dentist should proceed to render whatever emergency treatment is necessary immediately.

2. The dentist should enquire if the Workmen's Compensation Board is responsible for dental care; if so, the workman should be instructed to advise the Board that he has sustained injuries to his teeth. The Board will then forward to him (the workman) the dental report form 8b which he should take immediately to his dentist.

3. The dentist should then report an appraisal of the health of the claimant's teeth prior to the accident. This is important.

4. The dentist should continue his report and indicate as exactly as possible the dental injury sustained, taking x-ray pictures if necessary. He should then make a diagnosis and in answer to questions on the form, indicate his recommended treatment of the dental injuries, including restoration of teeth lost in the accident.

5. The report should be made out as if reporting conditions to a fellow dentist. In recommending treatment or restorations it must be remembered that the Board is responsible for injuries received in the accident and nothing more. Often times the dentist suggests restorations such as fillings in carious teeth, replacement of teeth in dental spaces that existed before the accident or treatment of chronic periodontal conditions. Of course he should take all these conditions into consideration but he should keep in mind the fair appraisal of the Compensation Board's responsibility arising in the accident. It is

fair and proper to place the claimant's teeth in as good a condition as they were before the accident but no more.

6. On the back of the dental form provided by the Compensation Board is a schedule of fees allowed. These fees have been mutually agreed as fair by the Compensation Board and the Royal College of Dental Surgeons. With these fees in mind the dentist should estimate the cost of services to be rendered to the claimant. Practically all settlements are arranged with these fees as a basis; if the dentist feels a type of service required in a special case is not covered he should indicate this as his preference to the Board with reasons therefore. Any dentist has the right to refuse to give service for these fees; in such case the injured claimant should seek another dentist. A dentist is not permitted to accept the fee allowed by the Board and arrange for a further fee from the claimant except such arrangement is agreed to in writing by the Compensation Board.

7. When the Board's dental form has been duly filled in, and provision is made on its form 8b for all the foregoing information to be tabulated, it should be forwarded to the Board for its approval of recommendations. If the Board approves, authority to proceed will be given. When the case is satisfactorily completed payment will be made, according to agreement, by the Board. It should be remembered, however, that only emergency treatment may be rendered without the Board's authority to proceed.

Members of the profession in Ontario might be interested in a report appearing on Page 32 of the 1942 proceedings of the Board of Directors of the Royal College of Dental Surgeons dealing with Compensation Board matters.

Dental Nurses' Alumnae Association

The Dental Nurses' Alumnae Association held its opening meeting on Sept. 8, at the Faculty of Dentistry Building.

Miss Anna Lindsay, President of the Alumnae, welcomed the 1942 class of graduates.

Miss Anne Budd, convener of knitting, gave a report of work done by the nurses during the summer months and collected knitting to

be given to the University Women's War Service for the Red Cross.

Miss Mildred Brown, a bride-to-be, who has taken a keen interest in her work in the Alumnae during her membership, was presented with a wedding gift by Miss Betty Broadrib.

Dr. Frank Martin and Miss Marjorie Jackson showed coloured motion pictures of the presentation of the mobile dental clinic, made to the Canadian Dental Corps in June by the Alumnae. Major J. A. Grant, representing the Canadian Dental Corps, was a guest of the evening.

Miriam Jennings, Convener.

Dr. Harold Swales Bereaved

A host of intimate friends will learn with deep regret the death of Mrs. Swales on August 30. Mrs. Swales was an active member of the Ladies' Auxiliary to the Academy of Dentistry and the Canadian Dental Corps. Although not endowed with the best of health, she possessed much charm and endeared herself to members of the profession and their wives in Toronto.

Her death is mourned by her husband, mother, two sisters and one brother Pte. Howard McCabe of the Canadian Dental Corps.

Toronto Academy of Dentistry

The annual dinner of the Academy will be held at Eaton's College St., on the evening of Wednesday, October 21. Mr. James K. Pollock

of the Department of Political Science, University of Ann Arbor, Michigan, will be guest speaker. Mr. Pollock is an informed speaker and will discuss "An Understanding of Soviet Russia".

Hamilton Dental Society

The first meeting of the year will be held on October 14. Dr. Irwin H. Ante of Toronto will be guest speaker and will present a discussion on "Application of Better Dentistry" illustrated with Kodachrome slides. Dr. Ante makes approach through patient psychology and visual appeal.

Registration Dental Faculty University of Toronto

All but the first year class in dentistry have been under way since August 24. The enrolment is as follows—

Fifth year.....	56 registered
Fourth year.....	46 registered
Third year.....	62 registered
Second year.....	79 registered

In the second year class 37 successfully completed the first year in the Faculty while 42 are ad eundem students from other parts of Canada.

At time of writing the large class registered in the first year dentistry are taking a two weeks' aptitude test and from the results of this test a class of approximately 60 will be chosen.

The new class of dental nurses has a membership of 25.

EMPIRE NEWS

GREAT BRITAIN:

Rubber for Denture Bases

The fact that our enemies now control some 90 per cent of the total rubber production of the world renders it imperative that the greatest possible economy should be exercised in its use and that it should be used for those purposes for which no satisfactory substitute is

available. Thanks to the advances which have been made in the application of the acrylic resins to dental purposes we are no longer dependent on vulcanite for denture bases, and it is indeed more than probable that the use of rubber for the manufacture of vulcanizing rubber for dental purposes will be prohibited in the near future. It is therefore very impor-

tant that dentists, who have not already done so, should make themselves familiar with the technique of processing, at least one of the standard acrylic resin denture base materials,

and take steps to ensure that their mechanics receive adequate instruction in what seems certain to become a standard part of laboratory practice.—*Jour., Br. D. Assoc.*, July 15, 1942.

GENERAL NEWS

The House of Delegates of the American Dental Association Meets in St. Louis

Commander C. Raymond Wells, chief of the dental division of the Selective Service System, was elected president-elect of the American Dental Association at the annual meeting of the House of Delegates held in St. Louis August 24 to 26.

The meeting, which drew an attendance of more than 600 was held in lieu of the 84th annual meeting scheduled for Boston, which was postponed "for the duration" in accordance with the request of the Office of Defense Transportation that large gatherings be cancelled.

Dr. J. Ben Robinson of Baltimore, Md., succeeded to the presidency and Cincinnati was selected as the site of the 1943 House of Delegates meeting in October.

The only speakers at a special meeting on August 26 were Brig. Gen. Robert H. Mills, Chief, Dental Service, Office of the Surgeon-General, U.S. Army, and Lieut. Col. Sam F. Seeley of Washington, executive officer, Procurement and Assignment Service.

Gen. Mills discussed the services dental officers were being called upon to render in the Army, explaining that as members of the medical corps they co-operate closely with physicians in caring for the wounded in combat areas as well as administering to the routine dental needs of the forces.

Col. Seeley made it clear that the Procurement and Assignment Service expected all dentists under 37 to seek commissions immediately and said that all dentists up to the age of 45 should consider themselves available for wartime service either with the armed forces or for work in industrial areas.

Both speakers stressed the efforts being made in co-operation with the Preparedness Committee of the A.D.A. to avoid stripping civilian populations of dental service and at the same

time providing the nation's expanding armed forces with adequate dental officers.—*A.D.A. News Release.*

Dental Technicians

In the U.S. Army, dental officers (dentists) have charge of the laboratory, give orders and train technicians to do laboratory work. However, in the Navy, dental technicians are allowed to work in the mouth, rendering dental prophylactic treatment under supervision, after only three to five months' training. Not only is this disturbing in its present implications, but also because of the post-war possibilities it presents. These men will not readily relinquish a "privilege" they believe they have earned. The effect upon the dental profession and its standards can be most dangerous.—*N.Y. Jour. of Dentistry*, September, 1942.

Chicago Dental Society Announces Second Annual Prize Essay Competition

Winner to Receive Cash Award of \$500.00 and Expenses to Present Essay at 1943 Midwinter Meeting.

As its contribution to the encouragement of research in dentistry, the Chicago Dental Society announces a nation-wide competition for the best essay containing new and significant material of value to dentistry. One cash prize of \$500.00 is offered and the recipient will be invited to present his essay at the 1943 Midwinter Meeting to be held at the Palmer House, February 22-25 incl. The expense of attendance will be borne by the Chicago Dental Society and will be in addition to the cash prize of \$500.00.

New Use for Typewriter

Medical Economics states that a New Jersey physician has found a new use for an old typewriter. This discarded machine had been



DELEGATES' MEETING OF THE CANADIAN DENTAL ASSOCIATION TORONTO, ONTARIO, MAY, 1942

Sitting around the table commencing in the foreground: J. F. Morrison, Winnipeg, Sec. Manitoba Dental Association (Guest); M. H. Garvin, Winnipeg, Delegate for Manitoba; R. L. Pallen, Vancouver, Delegate for British Columbia; Stephen A. Moore, London, Ontario, Immediate Past President; C. Aberdeen E. McCabe, Valleyfield, Quebec (Guest); J. S. Lapp, Toronto, Ontario, Chairman of Public Relations Committee; R. A. Rooney, Edmonton, Delegate for Alberta and Chairman of the Executive Committee, and now President-elect of the Canadian Dental Association; Miss Olive Weir, stenographer; J. S. Bagnall, Halifax, N.S., Sec.-Treas., Canadian Dental Association; V. D. Crowe, Truro, Delegate for Nova Scotia; Sydney W. Bradley, Ottawa, Delegate for Ontario; F. A. Blatchford, Fort William, Delegate for Ontario; Armand Fortier, Montreal, Delegate for Quebec; J. Kenneth Carver, Montreal, Delegate for Quebec; Howard MacDonald, Saint John, Delegate for New Brunswick.

Standing, left to right: L. J. D. Fasken, Regina, Delegate for Saskatchewan; J. A. McMurdo, Summerside, Delegate for Prince Edward Island; D. W. Gullett, Toronto, Delegate for Ontario; A. L. Walsh, Montreal, President-elect and now President of the Canadian Dental Association; W. W. Woodbury, Halifax, Nova Scotia, President of the Canadian Dental Association and now Immediate Past President.

placed in the corner of the reception room awaiting its removal from the office. Every child that came to the office hastened to the typewriter and amused himself in typing some name or message. As it entertained more children than any former device it was left permanently in the corner of the reception room.

Alpha Omega Fraternity Presents Three Ambulances to the United States Army

Three ambulances were presented to the United States Army by the Alpha Omega Fraternity, following a luncheon ceremony at the Mayflower Hotel in Washington, D.C. Brigadier General Ralph H. Mills, Chief of the United States Army Dental Corps, accepted the gift which National President Dr. Meyer

Eggatz of Baltimore presented for the Fraternity.

Alpha Omega, with almost 350 of its membership already stationed in various parts of the world on active duty, had earlier, before the entrance of the United States into the conflict, presented a complete mobile dental unit to the Canadian Dental Corps at services held in Toronto.

Graduates of Dental Schools in U.S.A.

There were 1784 graduates from the dental schools of the United States for the year ending June 30, 1942. 521 or 29% had a bachelor's or other degree before beginning dental study and 174 others graduated in combined courses with both the bachelor's and the dental degree.

IN MEMORIAM

The members of the Canadian Dental Association extend their heartfelt sympathy to the bereaved relatives of the deceased referred to in this Section of the Journal.

*"The surest pledge of a deathless name
Is the silent homage of thoughts unspoken."*

Alfred Munroe Bisnett of Windsor, Ontario, aged 42 died August 12.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1924. Since that time he practised continuously at Windsor.

He was a member of the United Church. He took an active interest in Masonry and was an officer in the Optimist Club.

Dr. Bisnett is survived by his widow and mother.

•

John M. Shultis died at his home in St. Catharines on September 9 after an illness of several months.

He was the son of the late John Shultis, M.D., and Mrs. Shultis of Port Colborne, Ontario. He was born at Heathcote, Ontario, and received his early education at Port Colborne and Welland.

He was graduated from the Royal College of Dental Surgeons of Ontario School of Dentistry in 1922. He began practice in St. Catharines and has continued there until forced to give up because of his illness.

Dr. Shultis has lived a short but active life—highly esteemed by his colleagues and all who knew him. He was a member of the Hamilton Dental Society and Ontario Dental Association, a Past Master of St. George's Lodge A.F. & A.M., a member of St. Catharines Board of Education, 1933 to 1941, serving as chairman in 1936. He was a member of St. Catharines Board of Health for several years and was chairman in 1940. He was a member of St. Catharines Y.M.C.A., Men's Club and St. Catharines Golf Club. He was a member of St. Paul's United Church.

Surviving Dr. Shultis are his widow, two daughters, Annabelle and Patricia, and one son, John Douglas. One sister, Mrs. E. C. Butcher of Port Colborne, and two brothers, Dr. D. E. Shultis of Hamilton and Captain W. K. Shultis in the Canadian Dental Corps.

•

George Hicks of Watford, Ontario, died on August 17.

He was graduated from the Royal College of Dental Surgeons in 1893. He settled immediately in Watford and practised at that place for over forty-seven years.

He was a member of the United Church, being superintendent of the Sunday School for forty-five years and also a member of the Church choir. He served as chairman of the Watford Board of Education for a number of years and was a member at the time of his death.

Dr. Hicks is survived by his widow, one son and one daughter.

•

Sydney Scott Ionson of Port Rowan, Ontario, died September 6.

He was graduated from the Royal College of Dental Surgeons of Ontario in 1914, after which he practised at Shelburne for one year and at Port Rowan from 1915 until his death.

He was a member of the Board of Education for several years and served as Chairman. He belonged to the Lions Club and was an active Mason. In religion, he was a member of the Anglican Church.

Dr. Ionson is survived by his widow and one son.

. . . SECTION FRANÇAISE . . .

Comité de Rédaction

Président

Paul Geoffrion, B.A., D.D.S., A.I.D.O., F.I.C.D.

Assistant

Armand Fortier, D.D.S.

REDACTEUR

ALCIDE THIBAUDEAU, D.D.S., A.I.D.O.

516 est, rue Sherbrooke, Montréal, Québec

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Y. Lafleur, D.D.S., St-Hyacinthe
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Rapport du Comité nommé touchant l'Assurance-Santé Dentaire

A M M. les délégués de l'Association Dentaire Canadienne.
Messieurs,

Le comité nommé à cette fin soumet le rapport ci-dessous touchant la coopération des praticiens de l'art dentaire relativement à un plan d'"assurance-santé".

Nous suggérons que ces aperçus soient présentés au ministère fédéral des Pensions et de l'Hygiène, en réponse au désir qu'il a exprimé d'obtenir l'opinion explicite des dentistes du Dominion.

PROJET

À la demande du ministère fédéral des Pensions et de l'Hygiène, l'Association Dentaire Canadienne esquisse comme suit un projet de coopération des praticiens de l'art dentaire relativement à l'élaboration d'un plan d'assurance-santé.

Quoique nous ne voulions pas être censés partisans de la mise en vigueur d'un plan d'assurance-santé sans une étude plus approfondie que celle qui fut jusqu'ici consacrée à ce problème, nous tenons à énoncer expressément notre conviction qu'il serait hasardeux que l'Etat décrêtât un plan d'assurance-santé ou d'assurance-hygiène publique sans qu'y soient incluses les mesures essentiellement préventives qui se rapportent à l'art dentaire.

Nous ne jugeons pas qu'un plan—quel qu'il soit—puisse entièrement supprimer

les affections dentaires. D'autre part, nous croyons fermement que les méthodes suggérées ci-dessous diminueront au maximum possible l'indice de ces cas.

L'enfance est la période la plus facile et la plus économique durant laquelle il soit possible d'enrayer à la source les diverses affections dentaires. Les ravages de la carie, qu'on n'a pas hésité à qualifier de "honte nationale," sont bien connus de tous les fonctionnaires préposés à la diffusion des règles de l'hygiène. Dans les écoles qui n'ont pas de service d'hygiène dentaire, les constatations officielles révèlent de 95 à 98 p.c. de carie. Dans les municipalités où ces soins sont organisés depuis quelques années, cet indice a fortement diminué—de 40 à 50 p.c. en plusieurs cas. Le manque de fonds est un facteur qui, jusqu'ici, a entravé la diminution du nombre des affections dentaires. La stipulation d'une aide pécuniaire résulterait forcément en une situation plus favorable, dont les résultats éventuels seraient une amélioration considérable de la denture chez notre population. A cause de l'insuffisance de leur personnel, les dentistes canadiens ne tiennent pas à déclarer qu'ils seraient en mesure de donner leurs soins à tous les assurés ci-nommés, mais ils s'efforceront de leur mieux à réaliser l'exécution du plan à l'étude.

Considérant le personnel restreint dont ils disposent et l'emploi judicieux des fonds, ils sont convaincus et ils l'ont été de longue date, que c'est en traitant les affections dentaires chez l'enfant que se trouve l'unique solution congrue du problème qui nous occupe. Il est nettement plus possible de maintenir l'hygiène buccale de l'enfant que d'essayer de normaliser, dans toute la population, ceux dont la denture est mutilée.

En nous appuyant sur les énoncés ci-haut, nous soumettons le plan suivant:

ASSURES

Institution d'un système obligatoire d'assurance-santé dentaire pour tous les enfants jusqu'à ce qu'ils aient atteint l'âge de seize ans.

ADMINISTRATION

1- Coopérant avec les Bureaux Provinciaux de Chirurgie Dentaire, (tels que définis au 3e principe annexé aux présentes), le lieutenant-gouverneur en conseil établira un comité central et des comités régionaux affectés aux mesures d'hygiène dentaire. Ces comités seront responsables au directeur de l'assurance-santé quant à l'administration de tous les services dentaires et de tout ce qui concerne la pratique de l'art dentaire aux termes de la "Loi de l'Assurance-Santé".

2- Un Conseil Provincial d'Assurance-Santé sera établi, lequel représentera les professions médicale, dentaire, infirmière, pharmaceutique, le Conseil des Hôpitaux et des profanes comprenant les organismes industriels, ouvriers, et les groupements féminins ruraux et urbains, à condition que la majorité des membres soient des médecins et des dentistes licenciés et praticiens, ayant acquitté toutes les redevances en l'espèce et contre lesquels n'existe aucune sanction disciplinaire.

3- Un Conseil Fédéral d'Assurance-Santé sera établi, lequel comprendra des délégués des professions médicale, dentaire, infirmière, pharmaceutique, le conseil des hôpitaux, ainsi que des profanes représentant les organismes industriels, ouvriers et les groupements féminins ruraux et urbains, à condition que la majorité des membres soient des médecins et des dentistes licenciés et praticiens, ayant acquitté toutes les redevances en l'espèce et contre lesquels n'existe aucune sanction disciplinaire.

4- Une commission sera établie aux fins d'administrer la loi concernant l'assurance-santé.

5- S'il est censé nécessaire de nommer des inspecteurs affectés à l'administration de ladite loi concernant l'assurance-santé, en tant qu'elle se rapporte à l'art dentaire, ces inspecteurs devront être membres du corps officiel des dentistes, ayant acquitté toutes les redevances en l'espèce et contre lesquels n'existe aucune sanction disciplinaire.

BENEFICES DISPONIBLES A TOUT ASSURE

- 1- Un examen de la denture une fois tous les six mois.
- 2- Le cas échéant, un traitement prophylactique une fois tous les six mois.
- 3- Emploi de substances plastiques aux fins d'obturation pour les travaux de réparation.
- 4- Stipulation prévoyant l'emploi de matériaux spéciaux et d'appareils dans le traitement des accidentés.
- 5- Extractions et chirurgie dentaire nécessaires le cas échéant.
- 6- Anesthésie le cas échéant.
- 7- Arrangements spéciaux permettant d'envoyer le malade à d'autres professionnels pour des soins spéciaux.
- 8- Radiographie le cas échéant.
- 9- Stipulation prévoyant l'emploi de tels autres matériaux qui pourront être requis touchant la mise à exécution des procédés coutumiers dans la pratique de l'art dentaire chez l'enfant.

SUPPUTATION DES HONORAIRES

Pour tous les enfants qui n'ont pas atteint l'âge de seize ans et qui tombent sous les dispositions de la Loi concernant l'assurance-santé, il sera stipulé que le dentiste sera payé intégralement à même le fond d'assurance, les données dudit payement s'appuyant sur un barème fixé par le Bureau Provincial de Chirurgie Dentaire.

INTERPRETATION

Si, selon la disponibilité du personnel, les subsides et la situation en général, il est censé judicieux de modifier ce plan en portant à 17 ans, etc., l'âge susnommé de 16 ans, cette modification sera effectuée. On notera que cette prolongation de l'âge comprendra surtout les sujets déjà avantagés aux termes des dispositions relatives aux soins dentaires. Une augmentation graduelle de l'âge aura pour effet que le plan ci-étudié n'aura jamais à résoudre le problème d'une nécessité cumulative de soins relatifs à l'hygiène dentaire.

De tous les pays, notre Dominion serait ainsi le premier à établir un plan définitif et complet de "contrôle" de l'hygiène publique, au point de vue de l'art dentaire. Au cas d'un examen physique de notre capital humain après l'entrée en vigueur de ce système, le résultat différerait fort de celui obtenu au commencement de la guerre actuelle, alors qu'il fut constaté que 23 p.c. des hommes susceptibles d'être enrôlés en auraient été empêchés à cause de quelque affection de la denture.

L'Association Dentaire Canadienne donne volontiers son adhésion à ce plan parce qu'elle l'estime le seul qui soit rationnel du point de vue économique, et le seul aussi qui permette aux dentistes de fournir les soins congrus, compte tenu des disponibilités actuelles de personnel. En outre, les dentistes canadiens ne tiennent pas à participer à un arrangement qui stipulerait certains services tels qu'ils ne sont pas en mesure de fournir, même si les capitaux nécessaires étaient souscrits. Après mûre délibération, cet organisme estime que toute tentative de rendre des services reconnus impossibles serait profondément préjudiciable à leur profession, outre l'inévitable insuccès du plan tout entier.

Nous soumettons ci-dessous quelques propositions que nous croyons essentielles à la mise à exécution du plan d'assurance-santé, en tant qu'elle concerne l'art dentaire:

- 1- Un subside annuel aux fins de travaux de recherches, pour diminuer l'indice des affections dentaires.
- 2- Un subside annuel congru aux fins d'éclairer, sur l'hygiène dentaire, le public en général, ainsi que les membres de la profession. Nous sommes convaincus que cette éducation du public touchant l'hygiène dentaire est essentielle si le plan doit

réussir. De plus, l'expérience atteste que cette campagne diminuera notablement le coût du traitement.

3- Un montant qui suffira à aider les écoles dentaires canadiennes, compte tenu de la nécessité du rigoureux accroissement du personnel qu'exigera l'augmentation du nombre des assurés.

4- Lorsque sera augmenté le maximum d'âge aux termes du plan, une mise au point de la loi concernant l'assurance-santé devra alors être effectuée quant aux avantages apportés aux assurés et à la supputation des honoraires. Ces mises au point, présentes ou à venir, seront effectuées avec la coopération des représentants des dentistes canadiens.

Le tout respectueusement soumis.

PRINCIPES
applicables aux

MESURES D'HYGIENE DENTAIRE
et

ADOPTES PAR L'ASSOCIATION DENTAIRE CANADIENNE,
1^{er} 18 mai 1942.

1- Que le plan soit de portée nationale.

2- Que chaque gouvernement provincial soit libre d'adopter ou de rejeter l'adoption dudit plan, les méthodes d'application qui conviendront le plus utilement aux besoins de la population quant à l'hygiène dentaire, et l'administration des fonds en l'espèce.

3- Que ledit plan soit administré par la coopération du gouvernement provincial et du Bureau Provincial de Chirurgie Dentaire, conformément aux stipulations du statut provincial qui régit la pratique de l'art dentaire, tel que présentement constitué dans les diverses provinces.

4- Que la pratique de l'art dentaire soit exercée dans le cabinet particulier du dentiste, sauf dans les circonstances qui ne se prêtent pas à la pratique privée.

5- Que la réglementation du plan et l'adjudication congrue des fonds à affecter aux soins relatifs à l'art dentaire soient proportionnées et réglées par convention entre le gouvernement provincial et le Bureau Provincial de Chirurgie Dentaire, tel que défini à la 3^e clause. Un comité sera nommé à cette fin. Il aura cinq membres, dont trois choisis par le Bureau Provincial de Chirurgie Dentaire et deux par le gouvernement provincial.

6- Que les caractéristiques suivantes soient observées:

(a) Tout dentiste qualifié comme tel, ayant acquitté ses redevances en l'espèce et contre qui n'existe aucune sanction disciplinaire sera éligible aux termes de ce plan.

(b) Le malade sera libre de choisir son dentiste et le dentiste conservera le droit de refuser, de soigner un malade, pour des raisons d'éthique ou relatives à la géographie ou à sa profession.

(c) La base de ces soins sera de rendre disponibles les services du dentiste dans la pratique générale et d'agir comme intermédiaire pour envoyer les malades à d'autres professionnels aux fins de soins spéciaux.

7- Que les mesures dentaires préventives priment les mesures restauratives.

8- Qu'aucune entrave ne soit mise à la progression des standards dentaires professionnels acceptés.

9- Que des dispositions congrues soient prises aux fins d'encourager et d'aider les travaux de recherche.

10- Que tout plan adopté procure des soins aux nécessiteux au même titre qu'aux individus capables de participation pécuniaire.

11- Que la Profession Dentaire ait la prérogative de déterminer la nécessité et l'étendue des soins dentaires.

Copies délivrées à M. M. Pallen, McCabe, Morrison, MacDonald, Rooney, Bagnall et Walsh, dentistes.

Membres du Comité:

A. L. Pallen D.D.S.
5870, rue Cartier,
Vancouver, B.C.

Don W. Gullett, D.D.S., Président
211, rue Huron
Toronto, Ont.

J. F. Morrison, D.D.S.,
403 Medical Arts Bldg.,
Winnipeg, Man.

Howard MacDonald, D.D.S.,
1, rue Coburg,
Saint-Jean, N.B.

C. Aberdeen McCabe, D.D.S.,
17 rue Jacques-Cartier,
Valleyfield, Qué.

NOTRE BUREAU DES GOUVERNEURS

(Le Bureau des Gouverneurs du COLLEGE DES CHIRURGIENS-DENTISTES de la Province de Québec, a cru devoir prendre cette année, une initiative qui nous l'espérons, plaira à nos confrères. Il communiquera par la voix du Journal un compte-rendu assez élaboré de ses séances, afin de tenir la Profession au courant des problèmes qui se présentent et des moyens pris pour les résoudre.)

Assemblée du 11 Septembre 1942

Le Bureau s'est réuni à la Salle de la Faculté de l'Université McGill, grâce à la courtoisie du doyen, le Dr Walsh, qui a bien voulu mettre ces spacieux locaux à notre disposition.

L'assemblée était sous la présidence du Dr Armand Fortier, vice-président. Le Dr Fortier tient d'abord à remercier le Conseil de la Faculté de l'Université McGill, pour son geste courtois qui a permis au Bureau de se réunir dans un endroit aussi approprié et aussi accessible. Il souhaite ensuite la bienvenue tant aux Gouverneurs qui ont été réélus pour un nouveau terme, qu'à ceux qui ont été élus pour la première fois. Il désire signaler de façon toute particulière le retour sur le Bureau, de deux anciens présidents, les Drs Valmore Olivier, de Sherbrooke, et D. P. Mowry, qui ont bien voulu en vue des problèmes graves qui nous confrontent, se remettre à la tâche après de longues années de service, et apporter le poids de leur expérience et de leur jugement éprouvé.

La régistaira, Dr Denis Forest, donne ensuite lecture des minutes de la dernière assemblée, lesquelles après quelque discussion, sont acceptées sur proposition du Dr C. Archambault secondée par Dr G. G. Armitage.

Suivant l'ordre du jour établi par les règlements pour une première assemblée qui suit l'élection biennale, le Bureau procède ensuite à l'élection de ses officiers. Le Dr Conrad Archambault propose à la présidence le Dr Armand Fortier.

Comme il n'y a pas d'autres nominations, le Dr Armand Fortier est déclaré élu par acclamation à la charge de Président.

(D'après une coutume établie au Bureau depuis nombre d'années, l'élection d'un

président de langue anglaise suit d'habitude celle de deux présidents successifs de langue française.)

Le Dr V. Plamondon propose alors, secondé par le Dr J. Dallaire, le nom du capitaine J. K. Carver comme vice-président. Le Dr Carver remercie le proposeur, de l'honneur qu'on veut bien lui faire, mais il déclare que les obligations que lui impose sa fonction d'Officier dans le Corps dentaire, l'empêchent d'accepter quelque autre charge attendu qu'il pourrait être appelé outre-mer à une semaine d'avis. Le Dr Vinet propose à la première vice-présidence le Dr Albert Surprenant. Cette proposition est secondée par le Dr A. L'Archevêque, et acceptée d'emblée par l'assemblée.

Le Dr G. G. Armitage, proposé à la deuxième vice-présidence, décline à son tour, pour des raisons de santé et il suggère à sa place le Dr D. P. Mowry, lequel accepte la nomination en expliquant avec sa modestie habituelle, qu'il comprend que c'est la rareté des candidats qui rend son élection possible.

Le Dr Denis Forest est confirmé dans ses fonctions de registraire, sur une proposition du Dr A. L'Archevêque secondée par le Capitaine J. K. Carver.

Font aussi partie de l'exécutif, à titre de conseillers: les Drs C. Archambault, G. G. Armitage, E. Charron, G. Ratté, E. Vinet, M. Gosselin, Auguste Massicotte.

GOUVERNEURS DU COLLEGE DES CHIRURGIENS DENTISTES P.Q. MONTREAL-EST

Dr C. Archambault	2083	Bluery, Mtl.
Dr C. A. Contant	299	St-Georges, St-Jérôme, P.Q.
Dr H. David	1502	Ste-Catherine ouest, Mtl.
Dr J. A. Fortier	3605	St-Denis, Mtl.
Dr J. M. Gosselin	575	ave Atwater, Mtl.
Dr P.-E. Joly	2047	blvd Rosemont, Mtl.
Dr A. L'Archevêque, fils	1699	parc LaFontaine, Mtl.
Dr C. E. Laurin	177	Principale, Hull, P.Q.
Dr G. Lord	1426	Amherst, Mtl.
Dr C. A. E. McCabe	17	Jacques-Cartier, Valleyfield, P.Q.
Dr R. Meloche	2102	Rachel est, Mtl.
Dr A. Surprenant	4480	Bréboeuf, Mtl.
Dr E. Vinet	362	blvd St-Joseph est, Mtl.

MONTREAL-UEST

Dr J. W. Abraham	4018	ave Royal, Mtl.
Dr G. G. Armitage	1538	Sherbrooke ouest, Mtl.
Dr J. K. Carver	2339	ave Melrose, Mtl.
Dr E. Charron	1505	Crescent, Mtl.
Dr D. Forest	3632	ave du Parc, Mtl.
Dr O. A. Lefebvre	4143	Dorchester ouest, Westmount, P.Q.
Dr J. W. Morton	1410	Guy, Mtl.
Dr D. P. Mowry	1411	Stanley, Mtl.
Dr I. N. Pesner	5179	ave du Parc, Mtl.
Dr L. J. Rosen	1410	Stanley, Mtl.

QUEBEC

Dr J. Dallaire	525	St-Jean, Québec, P.Q.
Dr W. J. Leahy	6	d'Aiguillon, Québec, P.Q.
Dr V. Plamondon	7	ave des Erables, Québec, P.Q.
Dr G. Ratté	140	St-Jean, Québec, P.Q.

Section Française

TROIS-RIVIERES

Dr Auguste Massicotte	103	des Forges, Trois-Rivières, P.Q.
Dr A. Therrien		Shawinigan Falls, P.Q.

ST-FRANCOIS

Dr H. E. McKenna	118	Wellington nord, Sherbrooke, P.Q.
Dr V. H. Olivier	8a	Wellington sud, Sherbrooke, P.Q.

UNIVERSITE DE MONTREAL

Dr P. Geoffrion	1538	Sherbrooke ouest, Mtl.
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UNIVERSITE MCGILL

Dr A. L. Walsh	1414	Drummond, Mtl.
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PRESIDENT SORTANT DE CHARGE

Dr G. Pelletier	2286	Ontario est, Mtl.
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Le registraire soumet ensuite à l'approbation du Bureau certains rapports d'examen de 1ère et 2ème années assésés par le Dr Armitage. Ces rapports sont acceptés, après étude.

Le Bureau étudie les applications pour admission à l'étude de la chirurgie dentaire de MM. Jon J. Mendell & Harry R. Shkurnik. Ces candidats de langue anglaise possédant tous deux les qualifications requises, le registraire reçoit instruction de les enregistrer.

Le Dr J. Alderson Folkins demande par écrit au Bureau la permission de présenter à la législature de Québec un bill autorisant le Collège à l'admettre au nombre de ses membres.

Le Dr J. Alderson Folkins explique dans sa lettre, qu'il a poursuivi avec succès ses études à l'Université McGill, qu'il a gradué en 1940, et que lors de son admission à la Faculté Dentaire de cette Université, il remplissait les conditions requises, pour s'enregistrer comme étudiant, au Collège des Chirurgiens Dentistes de la Province de Québec. Puisqu'il avait complété la troisième année du Arts Cours à l'Université Mount Allison de Sackville, N.B. Ce fait est attesté par une lettre du Doyen de la Faculté Dentaire de l'Université McGill, le Dr A. L. Walsh. Le Bureau, après discussion, accorde à l'unanimité au Dr Folkins, la permission de présenter à la législature de Québec un bill autorisant le Collège à lui accorder après examen, sa licence pour l'exercice de la profession dentaire.

Le Dr Armand Fortier, à titre de délégué provincial à l'Association Dentaire Canadienne, rend ensuite compte au Bureau, d'une réunion spéciale de ce corps, tenue à Toronto, les 29 et 30 août 1942, convoquée à la demande du Président de cette association, le Dr A. L. Walsh, doyen de la Faculté dentaire de l'Université McGill.

Le Dr Fortier fait un bref historique des circonstances qui entourent les raisons de cette réunion.

"L'A.D.C., dit-il, avait demandé aux provinces de porter leur contribution de \$1. à \$4. par année, et l'une des principales raisons apportées était de retenir les services d'un secrétaire-trésorier, qui agirait en même temps comme gérant d'affaires du Journal de l'A.D.C. Or, ces fonds ont été mis à la disposition de l'A.D.C. par les différentes provinces, mais il restait quand même à faire le choix de cet officier qui posséderait

les qualités requises pour cette fonction et pourrait consacrer tout son temps à cette charge.

Il faut d'abord bien concevoir quelles seraient les fonctions de l'officier dont on projette la nomination. L'officier exécutif d'une association nationale comme la nôtre, devrait être un homme d'une culture intellectuelle assez élevée, connaissant et pouvant discuter librement les différents problèmes sociaux du temps avec le ministère fédéral de la Santé, avec son sous-ministre et les statisticiens, les actuaire, les économistes, qui forment le personnel des ministères fédéraux.

Vous savez tous, ajoute le Dr Fortier, que la principale question qui préoccupe actuellement l'A.D.C. est ce projet de législation en matière d'Assurance-Santé, qui inclut les soins dentaires, et dont un comité fédéral élabore minutieusement le projet. Or, dans la discussion d'une question comme celle-là, il s'agit non pas tant de savoir obturer ou extraire des dents, mais bien de savoir quelle est la proportion de la population qui souffre d'une carence de nutrition, quelle est la proportion de cette population qui pourrait rémunérer les soins dentaires qu'ils reçoivent (totalement ou en partie) et une foule d'autres aspects de cette mesure sociale.

En un mot, ce sont autant de problèmes qui relèvent plutôt d'un sociologue, d'un économiste et d'un actuaire que d'un dentiste lié à sa pratique. Donc, un tel choix, vous le comprenez, est fort difficile à faire, d'autant plus que les candidats remplissant les conditions exigées, sont très rares. Un seul réunissait, au goût des officiers de l'A.D.C. ces conditions, mais malheureusement ses services sont actuellement retenus par une autre organisation, et il est peu probable que nous puissions l'engager à se joindre à notre association.

A cette réunion de Toronto, le Président de l'A.D.C. nous a longuement soumis tout ce problème; il nous a ensuite demandé si nous ne croyions pas que dans les circonstances et considérant l'urgence pour notre association d'obtenir les services d'un tel officier, si nous ne considérerions pas, dis-je, la nomination d'un homme qui ne serait pas un dentiste, tout en étant hautement qualifié dans les domaines mentionnés plus haut. "Un homme, dit le Dr Walsh, qui posséderait un Ph.D., qui aurait fait de l'étude des problèmes sociaux de l'heure une expérience de plusieurs années, un homme qui de plus, de par sa formation, pourrait discuter avec connaissance de cause avec les experts du gouvernement fédéral, serait probablement plus en mesure de rendre service à l'A.D.C. qu'un dentiste, qui même bien qualifié en sa spécialité, ne connaîtrait que très peu les problèmes d'assurance-santé, de médecine sociale et d'autres à-côtés qui retiennent actuellement l'attention du gouvernement fédéral. Ne serait-il pas sage, continue le Dr Walsh, de jeter nos regards sur un tel candidat, et advenant le cas où ce dentiste dont nous voulons retenir les services ne serait pas disponible, d'engager pour une période de trois ans, un éducateur ou un économiste pour remplir cette fonction de secrétaire-trésorier, — gérant d'affaires — du Journal de l'A.D.C.?"

Les autres délégués qui représentaient différentes régions du pays et différentes associations dentaires, discutèrent également le problème, mais le consensus omnium de toute cette discussion fut que, attendu qu'aucun d'eux n'avait jusqu'à ce jour considéré l'éventualité ou la possibilité d'engager un non-dentiste, comme secrétaire de notre Association, ils ne pouvaient pas se prononcer sur un tel choix, attendu surtout qu'ils n'avaient pas l'autorisation des corps qu'ils représentaient, pour prendre une telle décision.

L'un d'eux, le Dr Marshall, si ma mémoire m'est fidèle, suggéra cependant qu'il serait peut-être opportun de procéder à la nomination d'un secrétaire honoraire qui serait un dentiste, à un salaire nominal, et d'un secrétaire-trésorier-gérant, plein temps, qui commanderait le salaire qu'on destine à un officier remplissant ces charges.

Après avoir longuement discuté la question, cette assemblée se dispersa sans en être venu à aucune conclusion. C'est pourquoi afin d'avoir votre opinion sur cette

importante question, dont je vous sou mets tous les détails, je demanderais au Dr Carver, également délégué de cette province à la réunion de Toronto, et au Dr Walsh, président de l'A.D.C. de fournir les explications que j'aurais pu omettre dans cet exposé."

Le Dr Walsh prend la parole à son tour; il explique qu'en vertu de sa familiarité avec les organisations dentaires américaines, tant fédérales qu'organisations d'état (American Dental Association—American Association of Dental Schools, etc.), il croit fermement que ce serait un geste sage de la part de l'A.D.C. que de choisir comme officier exécutif un homme qui, tout en possédant les qualifications énumérées plus haut par le Dr Fortier, ne détiendrait pas un doctorat de chirurgie dentaire. "J'ai été à même de constater, dit-il, les immenses services rendus à leurs organisations respectives, par le Dr Blanch, de l'American Association of Dental Schools, et par le Dr Faulkner, de l'Association Dentaire Canadienne, et je puis vous assurer que des hommes de ce calibre, en vertu de leur haute culture intellectuelle et de la familiarité qu'ils possèdent des problèmes sociaux et économiques de l'heure, sont à même de rendre des services considérables à leur organisation. Tandis qu'un dentiste a passé quatre ans à étudier sa profession et qu'il dépense le reste de sa vie, soit à améliorer ses connaissances, soit à gagner sa vie. Il est de ce fait un individu hautement spécialisé. Un éducateur, par contre, se doit de se familiariser avec les problèmes tant éducationnels qu'économiques ou sociaux. Je crois donc fermement qu'un homme de ce calibre dans ses contacts avec les autorités fédérales, pourrait, pour le moins nous rendre autant service qu'un dentiste dont les connaissances se limitent forcément à son champ d'action. J'ajouterai, dit-il, qu'un homme possédant une haute culture intellectuelle, peut dans un laps de temps relativement court, étudier et absorber les problèmes qui sont ceux d'une association nationale, telle que la nôtre."

Le Dr Charron prend également part à la discussion et déclare qu'à son sens l'A.D.C. ne pourrait faire erreur en retenant les services d'un homme qui posséderait les qualifications intellectuelles d'un Montpetit ou d'un Bovey. "N'oublions pas, dit le Dr Charron, que les décisions que nous sommes appelés à prendre actuellement, auront une portée considérable sur l'avenir de notre profession, et je crois que le geste que préconise le Dr Walsh, est celui d'un homme de vision. Je propose donc que ce Bureau autorise ses délégués à l'A.D.C. ainsi que le Dr Walsh, membre de ce bureau, à procéder au choix d'un secrétaire trésorier, et que si aucun dentiste ne répond aux exigences de cette charge, nos délégués puissent, s'ils le jugent opportun, recommander la nomination d'un non-dentiste."

Le Dr Valmore Olivier ajoute que bien qu'il soit vrai que rares sont les dentistes qui ont eu les loisirs ou les penchants d'étudier la sociologie, il ne faut tout de même pas oublier dans le choix d'un candidat, que notre groupe ethnique a une mentalité quelque peu différente du groupe anglo-Saxon et il exprime le souhait que le futur secrétaire-trésorier de l'Association Dentaire Canadienne parle ou du moins comprenne le français.

Le Dr Walsh assure là-dessus le Dr Olivier, que le candidat auquel pensent actuellement les officiers de l'A.D.C. écrit et lit le français et le parle aussi quelque peu.

Après lecture et discussion de la correspondance, et autres matières de routine, la séance est levée.

Armand Fortier, Président.

Diabète et Système Dentaire

Par le Dr AZERAD,
Médecin des Hôpitaux.
(L'Odontologie, août, 1937)

Je tiens d'abord à vous remercier de l'accueil si cordial que vous me réservez.

Je dois vous dire tout de suite que je vais simplement vous exposer quelques faits que mon expérience m'a enseignés. Quand je dis "mon expérience", je commets un petit mensonge, car j'ai eu l'extrême bonne fortune d'avoir à mes côtés, à l'Hôtel-Dieu, l'un d'entre vous dont la modestie égale la science, et ce n'est pas peu dire, j'ai nommé M. Coën, qui veut bien assister presque chaque fois à ma consultation et dont j'ai appris énormément sur cette question des relations entre les affections dentaires et le diabète.

C'est une question extrêmement complexe et qu'on peut envisager sous différents angles: le côté pratique et le côté théorique.

Je me bornerai surtout aux questions d'ordre pratique parce qu'elles sont d'un intérêt primordial autant pour le médecin que pour celui qui s'occupe de l'art dentaire.

J'envisagerai donc deux parties:

D'une part, l'influence que le diabète exerce sur le système dentaire; c'est une question qui est déjà mieux connue, mais qui est d'une importance capitale et sur laquelle précisément je crois que je vais apporter quelques idées sinon nouvelles, en tout cas dictées par l'expérience personnelle;

D'autre part, dans une seconde partie un peu plus courte, j'évoquerai sinon les relations, du moins l'influence que peut exercer à son tour le système dentaire sur le diabète;

Enfin, je terminerai par quelques conclusions d'ordre éminemment thérapeutique.

Je crois que tout candidat se présentant à n'importe quel examen ou concours se considérerait comme à moitié collé s'il oubliait de dire que dans le diabète on observe des accidents dentaires, extrêmement importants parfois. Je crois que personne n'oublierait de dire qu'on peut observer la chute ou le déchaussement des dents, de la pyorrhée, des caries, des abcès. Tout cela d'ailleurs est absolument exact.

Si l'on ouvre les traités classiques, on trouve sur ce sujet des données assez disparates. Dans l'article "Diabète" de "l'Encyclopédie médico-chirurgicale" rédigé par mon ami Boulin, on trouve les chiffres suivants:

Au-dessus de 60 ans, il y a plus de 60% de diabétiques qui sont absolument édentés; d'autre part, au-dessus de 40 ans, 70% des malades diabétiques sont atteints de pyorrhée.

Je ne peux contester ces chiffres, car moi-même je n'ai pas eu le temps d'établir de statistique. Cette question qui nous préoccupe, M. Coën et moi, aurait dû être prise sur la base de chiffres; malheureusement c'est tout une organisation spéciale qui est en train d'être faite dans mon service de l'Hôtel-Dieu et qui n'est pas terminée.

Je vous citerai plutôt, si vous voulez bien, les chiffres donnés par le médecin américain qui est la grande vedette de la diabétologie: Joslin. En Amérique, les statistiques portent sur des milliers de malades; elles ont donc quelque valeur.

Joslin, qui opère dans le milieu américain, pour qui le système dentaire a une très grande importance, à juste titre d'ailleurs, déclare que:

Pour les moins de 20 ans, on trouve:

- 34% de malades qui ont de bonnes dents,
- 24% présentant des abcès,
- 12% qui sont atteints de pyorrhée.

Entre 20 et 40 ans, la proportion change. On trouve déjà seulement:

19% de malades ayant de bonnes dents,

33% atteints de pyorrhée,

le reste présentant des caries ou abcès.

Entre 40 et 60 ans, le nombre de gens ayant de bonnes dents tombe à 9%, celui des malades atteints de pyorrhée s'élève à 70%.

Après 60 ans, on ne trouve plus que 4% de sujets qui ont de bonnes dents; 60% ont de fausses dents, et enfin 54% d'abcès et 74% de pyorrhée.

Les 74 et 54% sont pris sur des malades un peu spéciaux, de sorte que si vous additionnez le tout, vous observerez que vous dépassez 100%.

Mais il me semble qu'immédiatement une question doit se poser: Est-ce bien le diabète qui a produit ces lésions? C'est la question que nous nous sommes posée, M. Coën et moi, et ces derniers jours nous avons recherché l'opinion des auteurs classiques. Or, ils ne disent rien sur ce sujet; ils se contentent de constater les choses. Cependant, si on reprend ces faits à la lumière de l'expérience pratique telle qu'on peut la suivre dans une consultation consacrée à la diabétologie, on est obligé de souligner certains points que je voudrais énumérer devant vous, en y insistant.

Tout d'abord, parmi les malades qui viennent consulter pour leur diabète et dont j'ai fait examiner les dents par M. Coën — je parle de malades d'hôpital naturellement, car il faut distinguer d'après leur origine la clientèle de ville et la clientèle d'hôpital qui est, évidemment, différente — on peut affirmer que pour un grand nombre d'entre eux, il y a, avant tout, une faute de soins évidente; ce sont des malades qui ne sont pas habitués à soigner leurs dents; c'est un point sur lequel il faut insister dès le début.

D'autre part, nous avons constaté souvent que des malades venus consulter pour le diabète étaient absolument édentés. Nous leur avons posé la question: A quel moment avez-vous perdu vos dents? Or, bien souvent, c'est avant l'éclosion de leur diabète que leurs dents sont tombées; je ne dis pas seulement dans les années qui ont précédé le diabète. En nous basant sur certains signes: la soif, la polyurie, nous faisons remonter le début à quelques mois au-delà de ce que nous indiquent les malades. Ici, il ne s'agit pas de quelques mois, mais de plusieurs années, bien avant l'éclosion du diabète par conséquent.

Il y a de petits faits que j'ai remarqués assez souvent: par exemple, je reçois un très grand nombre de malades qui sont envoyés par le service d'ophtalmologie; ils ont de la cataracte; on fait une analyse qui prouve que le malade a du sucre dans ses urines et on me l'envoie avant de l'opérer. Je répète que je reçois énormément de malades qui proviennent du service d'ophtalmologie. Or, il existe à l'Hôtel-Dieu un service dentaire et je n'ai jamais reçu de malades venant de la consultation dentaire. Cela, tout de même, prouve que les lésions existaient bien avant et ne sont pas un symptôme permettant de découvrir l'existence du diabète.

Donc, si nous voulons résumer ces quelques faits qui ont leur importance particulière, je crois qu'on peut dire que les lésions dentaires sont souvent des lésions antérieures; les unes sont dues — et je crois que c'est la majorité — à un simple manque de soins; les autres sont dues aux causes habituelles sur lesquelles vous êtes beaucoup mieux documentés que moi.

Il existe deux grandes variétés de diabétiques absolument différentes l'une de l'autre; l'une comprend les diabétiques que l'on classe dans la catégorie des arthritiques, ce sont les diabétiques qu'on appelait autrefois les diabétiques gras et aujourd'hui diabétiques sans dénutrition azotée ou sans acidose; on peut dire qu'ils sont atteints de ces troubles particuliers qu'on étiquette "arthritisme" et l'on peut se demander jusqu'à un certain point si ceci n'explique pas les lésions dentaires autant que le diabète lui-même.

Il faut envisager également, c'est un autre chapitre, l'influence des glandes endocrines sur le système dentaire, glandes qui sont touchées dans le diabète. Je n'insiste pas, c'est un sujet extrêmement vaste qui pourrait nous conduire bien trop loin.

Cela pour aboutir à la conclusion suivante qui se trouve indiquée accessoirement dans le livre de Joslin, comme j'ai pu le constater, que si nous prenons un diabétique dont les dents étaient saines antérieurement à son diabète, saines parce qu'ils les soignait comme il devait, ce diabétique dont les dents étaient bien entretenues peut conserver un système dentaire absolument parfait.

J'ai eu la curiosité de relever, non pas dans ma statistique hospitalière qui concerne des sujets particuliers, mais chez moi, j'ai pu dépouiller une cinquantaine de cas de sujets diabétiques que j'ai eu l'occasion de regarder, dont j'ai examiné les dents personnellement puisque M. Coën me manquait: j'ai constaté qu'il y en avait une dizaine assez âgés dont la denture était défectueuse.

Vous voyez que nous nous trouvons ici dans une toute différente proportion de celle des médecins dont je vous rapportais les chiffres tout à l'heure.

D'ailleurs, Joslin écrit quelque part dans son livre: "Il faut dire que des soins fréquents évitent les dégâts dentaires, en sorte que certains grands diabétiques possèdent de bonnes dents, et cela peut arriver même lorsque le régime n'est pas strictement suivi, à la condition qu'on consacre à ses dents les soins qu'on doit leur consacrer."

Je reviendrai tout à l'heure sur ces conclusions et les conséquences thérapeutiques qu'elles comportent, mais je ne voudrais pas paraître trop absolu et nier que le diabète puisse avoir des conséquences quelconques sur l'état dentaire.

Le diabète est une maladie assez particulière dont je vous dirai quelques mots tout à l'heure; c'est une maladie qui en soi n'est pas très grave, ou dans certaines variétés n'est pas très grave, mais qui a ce pouvoir tout à fait redoutable de rendre graves les affections de ceux qu'elle touche.

On a comparé le diabétique à un colis fragile; on ne peut rien faire sur lui sans qu'immédiatement cela prenne des proportions inimaginables, et le moindre furoncle qui, chez un sujet normal, n'aurait pas d'importance, revêt chez un diabétique une gravité tout à fait particulière.

Il est certain que le diabète peut constituer un terrain sur lequel vont se développer plus favorablement certaines infections qui aboutiront aux abcès, à la pyorrhée. Ce sont là les causes habituelles de ces états pour lesquels le diabète n'a fait que jouer un rôle accessoire et favorisant, mais non pas un rôle déterminant, comme le laisseraient supposer les études de Joslin en particulier.

On s'est demandé par quel mécanisme le diabète pouvait favoriser ces affections; j'ai retrouvé dans de vieux traités—car les livres modernes ne s'en occupent pas—qu'on a surtout invoqué l'acidité salivaire. Je ne sais pas ce que vous en pensez. Pour ma part, je n'ai pas de documents personnels et je vous donne l'explication pour ce qu'elle vaut, pensant que vous pourrez en juger mieux que moi-même.

Un sujet diabétique est un sujet en état de moindre résistance et, dans ces conditions, toutes les causes qui peuvent agir défavorablement sur le système dentaire, agiront chez lui avec plus de facilité que chez un autre sujet. (à suivre)



Photo courtesy of The Beaver

The winter mail still reaches Fort Selkirk by dog team. The sled used is known as a Yukon sleigh—a toboggan on runners.—J. P. Kirk.

"Your sense of humour is a gauge of the standard of your maturity. It depends on your ability to take the rough with the smooth; to be genuinely amused by simple, homely things; to tolerate the shortcomings and peculiarities of others; to give the other fellow a chance to shine and to laugh with him and not merely at him. It shows only too plainly whether the years have mellowed you into a likeable human adult, or whether you have subconsciously remained a spoilt child."—C. H. Teece, B.A., in the "Psychologist."



HEATH MCINTYRE, D.D.S.,
Charlottetown, Prince Edward Island.

President of the Dominion Dental Council of Canada.
Secretary-Registrar-Treasurer of The Dental Association of Prince
Edward Island.

President of the Charlottetown Curling Club.
Past President of the Charlottetown Rotary Club.



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The Development of the Teeth

by I. SCHOUR, D.D.S., Ph.D., Sc.D., and M. MASSLER, D.D.S., M.S.
University of Illinois College of Dentistry, Department of Histology

UNIQUE CHARACTERISTICS OF THE TEETH

THE growth of the tooth illustrates beautifully and simply the principles that are followed in the growth of various parts of the organism. The reason for this is seen in the following unique characteristics of the tooth: (1) Its high sensitivity to variations physiologic and metabolic processes; (2) its kymographic quality which records these variations accurately; and (3) the permanency of the record in the enamel and dentine.

It thus becomes apparent that the tooth is more than a masticatory organ. It also serves as a biologic mirror which reflects the health and disease of the growing individual. This statement appears to be paradoxical because on the one hand we have the hardest and most calcified structure in the body, and on the other hand we have a very sensitive and delicate organ. This apparent contradiction is clarified when we make a distinction between the growing tooth and the adult tooth.

It is the growing tooth which acts as a biologic recorder of metabolic disturbances, especially in calcium metabolism,

and it is the adult tooth which serves as an organ of mastication.

Many controversies and misconceptions in the medical and dental literature have arisen from the failure to distinguish between the growing and the adult tooth and between the teeth and bone. For example, too much attention has been given to the question of calcium therapy in dentistry. It is true that the growing tooth in which enamel and dentine are still growing and calcifying needs calcium and other mineral salts for its normal development, but the amount necessary is easily provided for by a normal balanced diet unfortified by calcium tablets. On the other hand, in the adult tooth in which enamel and dentine are completed, calcium therapy can be of no avail because these structures are avascular and do not communicate with the blood stream. This is quite different from the highly labile bone structure surrounding the tooth.

STAGES IN TOOTH DEVELOPMENT

Tooth development is a life-long continuous process which consists of a number of stages. Each stage is governed by definite principles or laws, the integration of which makes for orderliness in the elaboration of form and size and, as a result, its function.

The life history of the tooth may be compared to the life history of an individual. The individual undergoes many developmental stages as he grows up into adulthood. He develops very rapidly during intrauterine life. After a sudden jolt at the time of birth he passes through infancy, childhood and puberty, and normally matures only after many years of effort. Similarly, the tooth undergoes a number of developmental stages before it can function. These stages which are

acterized by the chemical stimulation of particular cells in the stratum germinativum of the oral epithelium to become odontogenic, just as the fertilization of the ovum by the spermatozoon initiates the life of an individual. An absence of initiation results in anodontia while an excessive amount of initiation will be responsible for supernumerary teeth. (Fig. 3).

B. *Proliferation*. This stage consists of rapid multiplication of cells by mitotic

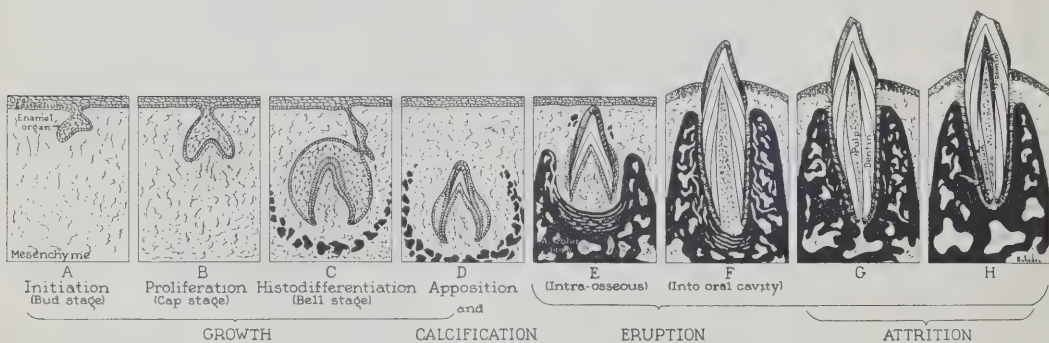


Figure 1

Life Cycle of Tooth. (Taken from figure 1, Schour and Massler, J.A.D.A., p. 1785, 1940.)

represented in figure 1 are essential to normal development and occur in the following sequences:

- I. Growth
 - A. Initiation
 - B. Proliferation
 - C. Histodifferentiation
 - D. Morphodifferentiation
 - E. Apposition
- II. Calcification
- III. Eruption
- IV. Attrition

The scope of this report is confined chiefly to the successive phases in growth (Fig. 2). For greater detail and analysis the reader is referred to various recent reports by the authors.

I. Growth

A. *Initiation*. This stage marks the beginning of tooth formation. It is char-

acterized by the chemical stimulation of particular cells in the stratum germinativum of the oral epithelium to become odontogenic, just as the fertilization of the ovum by the spermatozoon initiates the life of an individual. An absence of initiation results in anodontia while an excessive amount of initiation will be responsible for supernumerary teeth. (Fig. 3).

Proliferation normally ceases with the assumption of the next stage of histodifferentiation. If the latter is not attained, proliferation continues to an excessive amount and as a result the enamel organ enlarges without restraint and an ameloblastoma or an adamantinoma may result (Fig. 3).

C. *Histodifferentiation*. An important change in development is recognized in this stage. The cells of the enamel organ and dental papilla change in size and

The Development of the Teeth

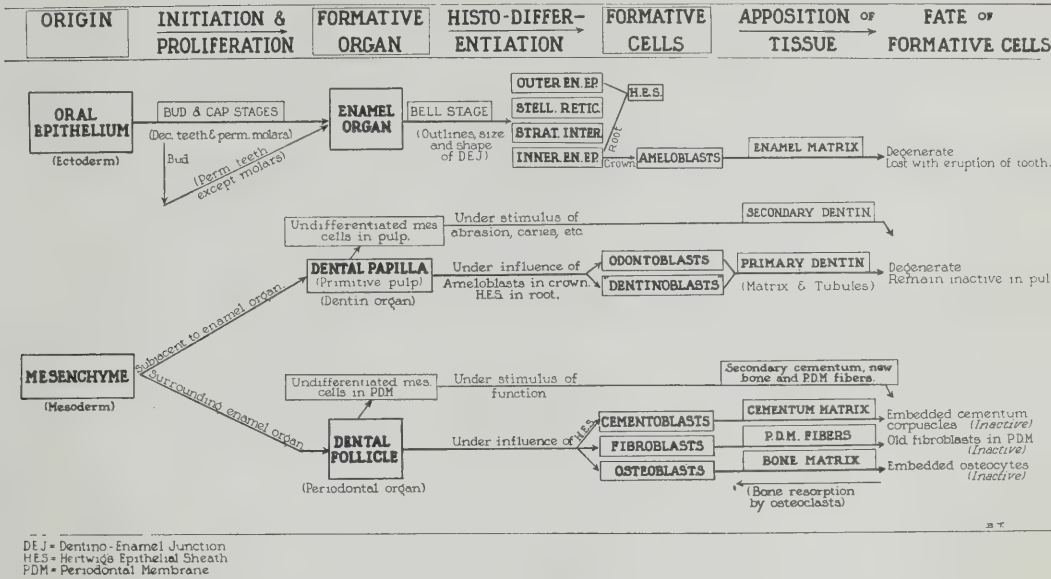


Figure 2

Chart showing morphologic changes during the growth stages of the tooth. (Taken from Table I, Schour and Massler, J.A.D.A., p. 1779, 1940.)

shape. They cease to multiply but become specialized in structure and function. The cells of the inner enamel epithelium receive their special assignment to become ameloblasts and acquire their appositional growth potential to form enamel. This potentiality is limited to activity that must proceed at a definite time (chronology), at a definite daily rate and for a number of days (the duration of the functional life span of the cell).

The mesenchymal cells subjacent to the ameloblasts also differentiate into the specialized odontoblasts and are assigned a similarly disciplined program of activity.

In the tooth it is not difficult to measure the growth potential of the ameloblast and odontoblast and to assess their functional life span (Massler and Schour 1941a). Since only one ameloblast is responsible for a given enamel rod, its length may be taken as a measure of the growth potential and the growth work done by the cell. By means of vital stain-

ing with sodium fluoride it has been possible to obtain the daily rate of enamel deposition. The life span in days may then be obtained by dividing the length of the enamel rod by the daily rate of formation. Thus

$$L \text{ (Length of Enamel Rod)} = G.P. \text{ (Growth Potential)} = \text{Daily Rate} \times \text{Life Span.}$$

In the dentine the length of the dentinal tubule represents the growth potential or growth work of the odontoblasts. By vital staining with alizarine Red S it has been possible to measure the daily rate of dentine apposition and thus obtain the data necessary to find the functional life span of the odontoblast.

A disturbance in histodifferentiation may result in odontomes of various types (Fig. 3). Hereditary opalescent dentine (dentinogenesis imperfecta) is a condition that results from a specific genetic disturbance in the histodifferentiation of the odontoblasts. These fail to form the

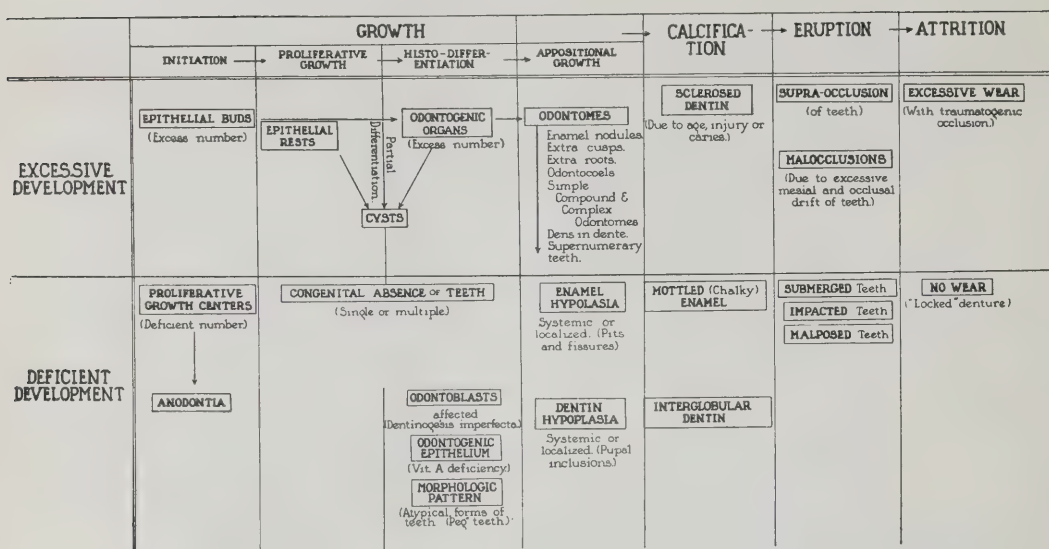


Figure 3

Classification of Aberrations in Tooth Development. (Taken from Table 3, Schour and Massler, J.A.D.A., p. 1782, 1940.)

regular arrangement of tubules and in addition their functional life span is disturbed so that they continue to form the imperfect dentine matrix for a longer time than normal. The result is the absence or striking reduction of the pulp.

D. Morphodifferentiation. Soon after histodifferentiation starts the inner enamel epithelium assumes an arrangement that outlines the future dentino-enamel junction. Thus the morphologic pattern of the crown is established preparatory to the next stage of development (appositional growth). A disturbance in morphodifferentiation may be responsible for the peg tooth, the Hutchinson's incisor or an abnormal scalloping of the dentino-enamel junction (Fig. 3).

E. Apposition. This stage does not begin until the cells have attained full histodifferentiation and have reached their particular position along the future dentino - enamel junction. Apposition constitutes the fulfilment of the growth potential acquired by the cells during histodifferentiation. It begins at the cuspal

tip, the growth centre, and follows an incremental pattern. An arrest in apposition results in enamel hypoplasia (Fig. 3).

These stages in the growth of the tooth are of more than academic interest. Many clinical conditions with which we are confronted in our daily practice are of developmental origin and can be understood and classified best in terms of the particular stage of development from which they arise. Thus the time of a disturbance plays a dominating role in the effects. The earlier the stage of development that is injured the more severe the result, and the more severe the disturbance that is necessary to modify the developmental stage. It is interesting to note that the incidence of disturbances is least in the earlier stages. Thus enamel hypoplasia, which involves the later stage of apposition, occurs in about 5% of the population, while anodontia, which occurs at initiation, is extremely rare and requires a genetic disturbance.

II. Calcification. The calcification of

the enamel and dentine follows for the most part closely upon the deposition of the matrix. Disturbances in calcification represent a relatively mild systemic disturbance, and are often the result of "subclinical" variations in calcium metabolism. For a complete discussion of this and related problems the reader is referred to Schour (1938) and Massler, Schour and Poncher (1941).

III. *Eruption.* When the crown of the tooth is completed and root formation begins, the tooth begins its migratory movement toward the oral epithelium. It becomes clinically visible within the oral cavity when about three-fifths of the root is completed.

Many problems in occlusion and malocclusion have their genesis during this time and it is wise that the clinician be aware of the pattern of the eruption of the teeth. For a review of the theories of eruption the reader is referred to Massler and Schour (1941b). The chronology of eruption and some factors that tend to disturb it are discussed by Schour and Massler (1941).

IV. *Attrition.* The process of functional wear is an important consideration in dental practice. The pattern of attrition and its effect upon the periodontal structures have been well elucidated by Harold Keith Box (1940).

In conclusion we wish to emphasize that a rational diagnosis and understand-

ing of a number of dental conditions will be facilitated by analyzing the developmental processes that are involved. The principles of growth illustrated in the teeth apply to a large extent to bone growth as well. A study of the teeth, however, facilitates their recognition since tooth growth is more regular and more stable than is bone growth, and is uninfluenced by function.

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"No degree of external success can compensate for internal failure. To gain the whole world is to lose, if the price is personal integrity."

Dentistry's place today has been earned by a century of conscientious and idealistic public service. Dentistry's place today is assured through confidence of a vast public. Dentistry's place today is one of recognized, readily assumed and well performed duties and obligations. Most of all, dentistry's place today, a lofty and honourable place, is justified and deserved only by the unwavering resolve of an organized dental profession to leave nothing undone so far as lies within its power, to increase and maintain the health and happiness of humanity.—Wilfred H. Robinson, D.D.S., in Jour. of the American College of Dentists.

On the Growth of the Jaws and the Eruption of the Teeth

by ALLAN G. BRODIE, D.D.S., Ph.D.

Professor and Head of the Department of Orthodontia, University of Ill., Chicago, Illinois

INTRODUCTION

TO attempt to study the growth of the jaws and the eruption of the teeth at the same time presents the same difficulty as trying to watch the three rings at a circus. There is so much going on simultaneously that many details would be missed. If one wished to see everything at the circus he would have to attend the show at least three times and keep his attention focused on a different single ring each time. In the study of growth and eruption even this would be insufficient because each tooth is a ring unto itself and each growth stage must be analyzed. On the other hand, if one considers the two processes as distinct entities, he is apt to err in the same manner that a student of history does when he studies first American history, then English and then French history. He has them so thoroughly separated that the events of each might just as well have occurred on separate planets. It requires considerable correlation before one realizes that certain epochs in one caused, or were the result of, epochs in another. It is likewise necessary, in the subject under discussion, to attempt some sort of a compromise between these two methods in order that the essential interdependence of the two processes be made clear without the loss of clarity gained by separate considerations.

THE FACE AT BIRTH

Since we shall have occasion to refer to certain relationships between the teeth and surrounding parts, it seems appropriate to set the stage before placing the actors upon it. We shall therefore attempt

a description of the face at birth, calling attention to certain structures and relations as they are found at this age. For purposes of clarity we shall divide the head into its two main parts, viz, cranium and face.

At birth the cranium is quite different from what it will be in the adult. Proportionally it is wide, giving it a round appearance. Its anteroposterior dimension is the greatest even at this age but relatively not as great as it will become. This means that the growth rate has been higher in the anteroposterior direction during intrauterine life and, since this disproportion increases with age, that either the rate remains higher or that the lateral growth stops earlier. Actually, the second has been shown to be the case. The third dimension, height, increases slowly but not as slowly as width. We are thus introduced to different gradients of growth in this part.

The face at birth is at a much lower stage of development than is the cranium. Here width is actually greater than either height or length (depth). If one were to state the adult ratio between the face and cranium as 1 to 1, the ratio at birth would be between 6 or 8 to 1 in favour of the cranium. Thus it follows that the face must increase its dimensions at 6 to 8 times the velocity of that of the cranium.

A facial skeleton of the baby seems to be all orbits, and indeed these apertures are closer to their adult size than any part of the face. Between them lies the nose, bounded below by the palate where the middle face seems to end. Although the alveolar process is very indifferently

On the Growth of the Jaws and the Eruption of the Teeth

developed, a lateral x-ray taken at this age reveals all of the deciduous teeth in the various stages of development. The upper incisors are found between the floor of the nose and the free border of the alveolar processes, but well behind a line dropped from the anterior nasal spine. From here back the teeth lie at progressively higher levels with the second deciduous molar at or above the level of the nasal floor. Posterior to this tooth and at a still higher level will be seen the crypt of the upper first permanent molar, just anterior to pterygomaxillary fissure. It should be remembered that the maxillary sinus hardly exists at this age.



Figure 1

(Left) Usual conception of jaw relationship in newborn (after Brash). (Right) Profile tracing of x-ray of infant of 3 months. Jaws are invariably wide apart.

Having considered the maxilla one naturally thinks next of the mandible, but before turning to this bone another matter claims our attention, namely, the tongue. The idea seems prevalent that the gum pads of the upper and lower jaws are in apposition at this early stage, (Fig. 1), but this is not the case. To the contrary, they are wide apart. The tongue occupies the entire mouth cavity and, being proportionately larger than the jaws, it flares out over the alveolar processes and supports the lips from in back. With the jaws in this relation the tongue is not crowded back into the pharynx as would otherwise be the case. Actually, this organ and the mandible are maintained in a position of balance by the pull of a great many muscles running to them from a

number of points, and their resulting position is the same now as it will be in the adult. This is shown if one draws a line from the point nasion to the centre of sella turcica and another as a tangent to the lower border of the mandible. When these lines are extended backward until they meet they form an angle. If this angle is read at three months and at seven years in the same individual, the readings will be the same (Fig. 2).



Figure 2

Superimposed tracings of x-rays of same individual at 3 months and at 7 years. Note stability of relation of mandible.

A lateral x-ray of the mandible at birth reveals that the form of the bone is not markedly different from that of the adult except that the portion designated as the alveolar process is absent. At this early age its place is occupied by the gum pad, a thick connective tissue beneath which the teeth lie in open crypts. The teeth in this jaw lie more nearly at the same level than in the upper and slightly closer to the free border. The crowns of all of the deciduous teeth have started to calcify and not infrequently one cusp of the first permanent molar. The presence of this

tooth germ is indicated, in the absence of beginning calcification, by a rarefied area in the lower anterior portion of the ascending ramus. The axis of the crypt, which quite accurately foretells the mesio-distal contact line of the crown, is not disposed in the same line as the deciduous teeth. Its mesial end is at about the same level but its distal end is higher, giving the impression that this tooth will have a marked mesial inclination as it erupts.

The ramus of the mandible is wider, anteroposteriorly, in proportion to the height of the body than it is at later stages because of the absence of a bony alveolar process. The condylar head is ball-shaped and the temporal fossa is shallow and relatively large, permitting great freedom and range of movement.

Our stage is now set; our actors are present, and we are ready to watch the play unfold. But one set of opera glasses (in this case research methods) is not sufficient. We must view it with several since each will be subject to certain limitations, and not until we have examined the same actor from different aspects are we able to decide with any certainty what his role is. In the study of the growth of the face and the eruption of the teeth important information has been derived from microscopy, vital staining, examination of skulls and from the serial x-raying of the same individual throughout the growth period. Of all of these only serial roentgenology permits the study of the same individual over any considerable period of time. Since this method also gives us the most generalized picture we shall examine some of the findings it has yielded before attempting their interpretation.

If one follows the growth of any single individual with serial x-rays he discovers that the pattern of development follows a very regular and orderly course in its progress from the infant to the adult. Furthermore, this pattern is fundamentally the same in all animals and strikingly similar in those of the same species. In the

human it is established by at least the third month of postnatal life and probably before birth. To attempt to follow each detail or even the progress of the whole at once is impossible. We therefore break it down into various logical divisions and study these first (Fig. 3). The bony nasal cavity is our starting point.

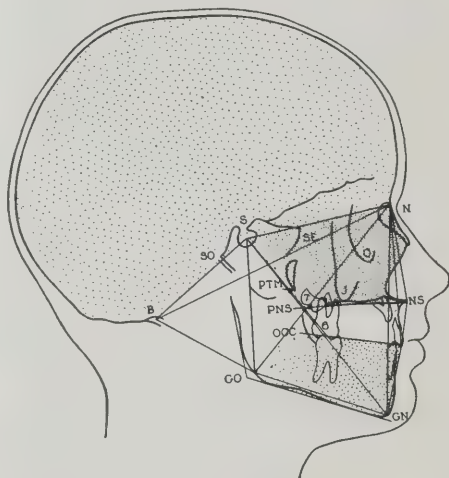


Figure 3

Tracing of cephalometric x-ray showing division of head into various areas for purposes of study.

GROWTH OF THE NOSE

The nose is bounded above by the cribriform plate of the ethmoid bone, which structure also forms the floor of the braincase in this area. Anteriorly it is lengthened by the frontal bone and posteriorly by the sphenoidal body. A line drawn from the centre of the sella turcica on the superior surface of the sphenoid to the fronto-nasal junction (nasion) will be found to follow the boundary closely. The floor of the nose is obviously the inferior border and its length is determined by the anterior and posterior nasal spines. Connecting the anterior ends of these two roughly parallel lines bounds the nose in front for the purpose of our study.

If one studies the behaviour of this area by laying out such diagrams for successive

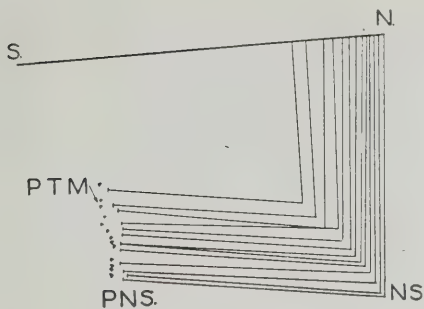


Figure 4

Diagrammatic composite pattern of growth of nasal area of twenty-one white males from the third month to the eighth year of life.

stages of growth and either superposing them or tabulating the actual measurements, (Fig. 4) he finds: (1) that the line S—N slowly lengthens, resulting in a more forward position of N; (2) that the line connecting N with the anterior nasal spine always forms the same angle with the S—N line, indicating that the anterior nasal spine is going forward at the same relative speed as that at N; (3) that the hard palate or floor of the nose descends from the cranial base in such a manner that its successive stages are parallel to each other and (4) that the posterior nasal spine, instead of following the downward and forward movement of the anterior nasal spine, goes straight downward. (Just posterior to this point one sees the V mark indicating the pterygo maxillary fissure. This marks the junction of the pterygoid process of the sphenoid

bone with the tuberosity of the maxilla.) This landmark also travels straight downward, and the significance of this behaviour will be pointed out later.

It is thus seen that the growth of this part of the face, at least, is remarkably steady and even, with the posterior portion remaining stable in position and the anterior going forward. With height being added evenly throughout by the parallel descent of the palate, the anterior nasal spine is given a downward as well as a forward direction. Another important idea of the stability of this area is gained if one measures the distance from nasion to chinpoint and, taking this as total face height, expresses nasal height (N to NS) as a percentage of the whole. It will be found to constitute 43 per cent regardless of age.

GROWTH OF THE UPPER DENTAL AND ALVEOLAR AREAS

This area has a common boundary with the nose, viz: the hard palate. Its lower boundary is at first the free alveolar border and later the occlusal plane of the teeth. The anterior boundary may be taken as a line from the anterior nasal spine to the tip of the maxillary central, whether deciduous or permanent. The delicacy of the alveolar process prior to the eruption of the teeth is such that it is burned out in the average lateral x-ray headplate. The teeth, however, can be seen clearly and it is upon these that we first focus our atten-

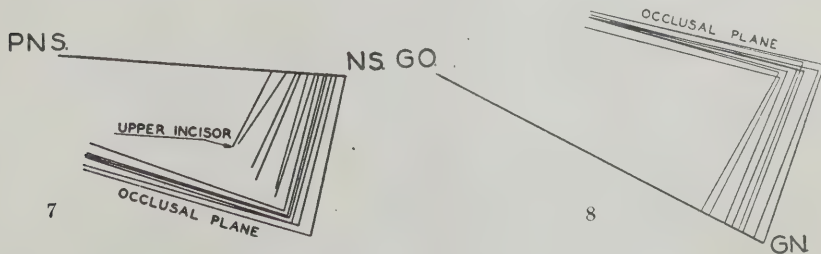


Figure 5

Diagrammatic composite pattern of growth of upper dental and alveolar area (left) and of body of mandible in twenty-one white males from the third month to the eighth year of life.

tion. Their relative locations at this age have already been described. Their progression towards their functional positions may be studied by using the nasal floor, already shown to be highly stable, as a plane of reference. (Fig. 5). Let us first study the behaviour of the deciduous central.

If one accepts the palate as a stable plane and the posterior nasal spine as a fixed point, it becomes obvious immediately that since the entire plane is descending it will be necessary to employ, not the same base each time, but that plane which represents the position of the palate at the stage which is being studied. It should be recalled that the anterior nasal spine is moving downward and forward. In spite of this, a line drawn from this point to the tip of the maxillary incisor will form a constantly increasing angle with the nasal floor at each stage until the tooth goes into function. At this time the angle stabilizes, although the line continues to grow longer. This indicates that the tooth is going downward and forward at a higher rate than is the nasal floor. If one connects all of the incisal points representing the various stages, both before and after occlusion is established, he obtains practically a straight line. This indicates that the constantly enlarging angle of the earlier stages, referred to before, is *not* an indication of greater forward than downward movement but merely a *higher rate* during the eruption period. Actually, the path is the same before and after occlusion is established. What is still more curious is that the permanent incisor behaves in an identical manner. It drops into function on the same line as its deciduous predecessor, and remains on the line although continuing to go downward and forward.

When one studies the behaviour of the upper molars in a similar manner certain differences are noted. Here a line is drawn from the centre of sella turcica to the notch formed by the mesial and distal

buccal cusps of the tooth being studied.

He may thus read the angular relation of this tooth to the line S—N, or anterior cranial base. Since all behave in a similar manner, we will start with the second deciduous molar because this is the most distal discernible tooth at birth. Here again the angular reading increases with age, but since this end of the base is stable the effect is quite different. (Figs. 6 and 7).

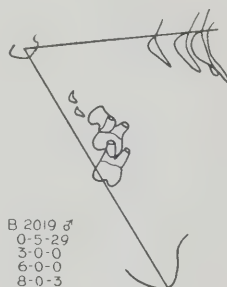


Figure 6

Successive tracings of same individual, superimposed on S—N line, and showing course of descent of maxillary first molar before coming into occlusion.

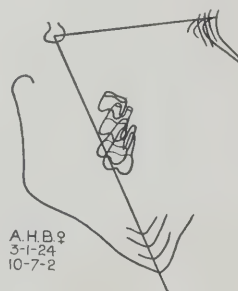


Figure 7

Superimposed series of same individual, showing change in course of descent of maxillary first molar after coming into occlusion. From this time on the molar will be found in the same relation to the S—Gn line.

This tooth drops steadily in a vertical direction, paralleling the downward course of the posterior nasal spine and the pterygomaxillary fissure until it comes into occlusion. The upper first permanent molar follows a similar, but some-

what posterior, path until it comes into occlusion. By this time it is found on a line which connects the chin point with the centre of sella turcica. Henceforth it will always be found on this line. The second and third permanent molars follow similar paths but posterior, of course, to that of the first. Hence we see that once they are in occlusion the molars follow a downward and forward path parallel to that of the incisors.

The selection of a single point on a tooth in determining the direction of its eruption fails to indicate certain other changes accompanying its main movement. When first seen in the x-ray, the occlusal surface of each molar faces almost distally, or toward the pterygopalatine fossa. The frontal picture shows that it also faces toward the buccal. Each succeeding stage finds it orienting itself more in the direction in which it will function, but even when it finally breaks through into the mouth its occlusal surface faces backward and buccally. It will continue this rotary movement for some time after it has come into occlusion.

Before going further it would seem desirable to attempt some interpretation of the material already uncovered. We have thus far pointed out the results of growth in the upper jaw as these are seen in progressive x-rays of the same individual. As indicated earlier, one cannot understand more than a single phase of behaviour with a single method of study. The x-ray tells us in this case what has happened to the positioning of the various parts being studied, but is inscrutable on where or how it has come about. For the answer to these two problems we must change our method of study. We must view our actors with different glasses.

In 1736 the observation was made that animals fed madder root exhibited a redness in their skeletons. Subsequent researches showed that only those parts of the bone that were growing took up the dye. These discoveries laid the founda-

tion for the life work of John Hunter who, in 1771, published his "Natural History of the Human Teeth." This was the first account of the growth of the jaws based on scientific observations. Since that early time many investigators have employed vital staining and this method, together with microscopy, has yielded many of the secrets of how and where bones grow. Alizarine Red "S", a derivative of madder, has largely supplanted the use of the root, being easier to administer and to control as to dosage.

Alizarine injection of living monkeys offer the second phase of our study of the face. We seek to determine now where the additions of new bone have been made that have resulted in the changes noted in the x-ray. When one alizarinates a very young animal the entire skeleton seems to take up the dye but this is not actually the case, as can be determined by fracturing or cutting one of the bones. When this is done it is seen that only the surface is stained. But at this early age the various bones are increasing their size rapidly by growth on all surfaces. As age advances it is noticed that the depositing of bone over most surfaces slows down or ceases, as indicated by the disappearance of the staining phenomenon. Certain areas, however, continue to take the dye as indicated by deep colouration. In other words, the bone continues to grow at certain "growth sites" and these may be found long after generalized growth has ceased. They are especially prominent at the growing ends of long bones where they indicate the activity of epiphysal plates in contributing to the length dimension.

These localized areas are not separate and distinct growth phenomena but should be looked upon as accentuated points in the generalized growth referred to above. They mark those sites where growth proceeds at a higher rate and/or continues for a longer time. Obviously they lead to gradual changes in form. If one thinks

of a spherical body growing equally all over its surface, it follows that its ultimate form would still be spherical. If, however, one visualizes a focal point at which growth proceeds at a higher rate, it can be readily seen that its spherical form would gradually be changed to one that might be elliptical. Given several such foci, each with a different rate of growth, the possibilities for variation in form become infinite.

If an alizarinated monkey skull is examined at almost any age the red staining will be found at the free border of the alveolar process, indicating a continuing growth at this location. Since it is found even after increases in size have ceased, one can only explain growth at this area as an adjustment to the continual eruption of the teeth resulting from wear. Prior to this advanced stage, however, the growth at the alveolar margin must be looked upon as an important contributor to face height. It seems to be responsible for the entire growth of that portion between the nasal floor or palate and the occlusal plane. In animals below the monkey the alveolar process has been given credit for the major part of vertical face growth by previous investigators. This is not surprising if the difference in facio-cranial relations in the long snouted pig and the short snouted monkey are realized. In the pig the alveolar process is almost the sole contributor to facial height. When the axis of the face changes to one that is more vertical, however, it is found that those sites which formerly contributed to length are now so arranged that their activities contribute more to the vertical dimension. This will be considered at greater length later. For the present it is sufficient to look upon the alveolar process as the area which provides first, for the accommodation of the deciduous dentition and the development and housing of its successor, and second, for the eruption of the permanent teeth with their higher crowns and longer roots.

This vertical increase would not take care of the three permanent molars, however, whose proper positioning requires a tremendous increase in the length of the alveolar process.

Until the complete eruption of the upper third molar a heavy staining reaction at the maxillary tuberosity will always be found. This structure, it should be remembered, is braced in back against the pterygoid process of the sphenoid bone—a cranial part. It should further be recalled that the pterygomaxillary fissure, or junction between these two bones, was shown by the x-ray to travel straight downward or, in other words, to be fixed in an anteroposterior position. Now if the junction be a fixed point and if a prolific growth is shown to be taking place at the tuberosity it follows that the result would be a forward movement of the entire maxilla. One can compare it nicely to a swimmer kicking himself away from the wall of a tank.

Alizarination reveals other growth sites than these, however. Throughout the entire growth period one finds the stain at the zygomatico-maxillary suture, over the floor of the orbit and at the frontomaxillary suture. At all of these sites the dye is deposited mainly on the maxillary side of the suture. Another place where a similar condition is found is at the transverse palatal suture, where the horizontal plate of the maxilla joins with that of the palatine bone to form the hard palate. If we analyze the planes in which these various sutures lie, we can easily comprehend the results of their combined activities. They represent the surfaces of the maxilla that articulate with other bones and their reactions against these other bones will necessarily determine the relations or spatial position of the maxilla.

As has been pointed out, the tuberosity faces posteriorly, as does also the posterior margin of the palatal process. Growth at these sites must inevitably lead to forward translation of the maxilla. The frontal

process faces and grows upward against the nasal notch of the frontal bone so that the bone would be forced downward from this site. The zygomatic surface faces and grows upward and backward against the zygomatic bone — the great stress-bearing buttress between the face and the cranium. This suture therefore lies at right angles to the resulting axis of the downward and forward vectors of movement.

From all of this we see that the downward and forward movement of the various facial points, so strongly shown in the serial x-rays, is largely the result of upward and backward growth of the maxilla against the cranium and its processes.

THE GROWTH OF THE MANDIBLE

Although the mandible is a freely movable bone it forms an integral part of the facial skeleton. It should be remembered, however, that its articulation is not with the face but with the brain case, through the temporal bone. Just as the upper face expresses its own individual growth on the moving stage of the anterior brain case, so the mandible, while growing itself, is carried along by the growth of the posterior brain case. Furthermore, these two parts of the cranial base are moving apart during growth so that while the upper face tends to be carried forward by its stage the mandible tends to be carried backward. A serial roentgenographic study of the growth of the same individual fails to show any evidence of this conflict of forces. (Figs. 8 and 9). True, the point at the angle of the jaw travels slightly backward as it goes downward, but the forward and downward movement of the chin point far overshadows this movement in magnitude. Where does the actual deposition of bone take place that brings about these changes in the spatial position of the mandible? Animals at different growth stages are injected intraperitoneally with Alizarine Red "S" in order to study the sites of growth at dif-

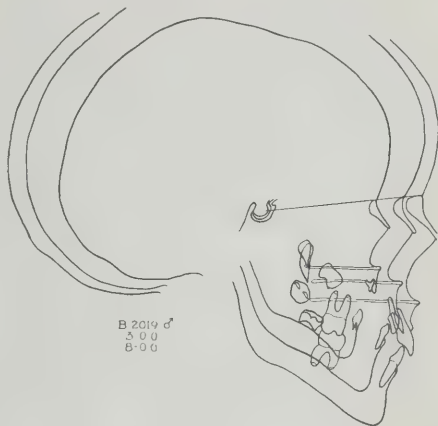


Figure 8

Three superimposed tracings of the same individual from 3 months to 8 years. Note that gonion goes downward and backward, while gnathion goes downward and forward.

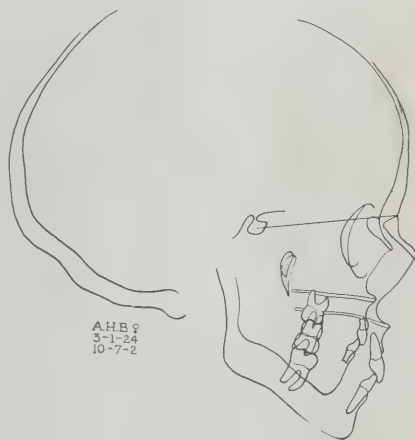


Figure 9

Two superimposed tracings of the same individual at 3 years, and at 10 years, 7 months. (Note continuation of same trends as in Fig. 8.)

ferent ages. We shall consider only three stages, namely, those corresponding to the deciduous dentition, the mixed dentition and the adult dentition in man.

The most striking differences between the three specimens lie in the sizes, and intensities of the staining reaction. The mandible of the youngest monkey is

found to be heavily stained on all surfaces. Growth is occurring everywhere and at such a rapid rate that a scrutiny of only the surface fails to reveal a definitive pattern of deposition. Only where the bone is extremely thin, as in the sigmoid notch, are alizarine lines discernible. Growth appears to be generalized during this stage.

The animal which corresponds to a six-year human dental pattern is quite different. The generalized type of growth has nearly disappeared, bringing into strong relief certain "sites" of growth. The most apparent of these is located at the head of the condyle where the red staining is intense. Another zone of deposition is present along the entire length of the posterior border of the ramus, the sigmoid notch and along the alveolar crest. Deposition on the inferior border seems to have stopped and only faint traces are noticeable on the lateral surfaces.

The findings on the adult specimen differ from the second only in degree; that is, only the rate of bone growth is diminished, not the mode. There is still growth at the condyle, the posterior border of the ramus, the sigmoid notch and the free alveolar margin. All are less intense and the lateral surfaces exhibit no trace of stain. It is thus seen that the principal *directions of growth* in the mandible are upward at the alveolar process, backward at the ramus and upward and backward at the condyle. This is just opposite to what might be inferred from a study of the serial roentgenograms alone, which show a downward and forward movement of this bone throughout growth.

When all of the findings on upper and lower face are considered together it is possible to derive from them certain other facts not obtained by direct observation. It will be remembered that the nasal floor (palate) descends from the cranial base in such a manner that the original angular

relation between them remains unaltered. As the face increases in height the nose is found always to contribute 43 per cent of this height. In a similar manner, the upper alveolar process and teeth descend from the floor of the nose without disturbing their angular relation if we consider the occlusal level of the teeth as another plane. Hence, we have two anatomical parts, nose and upper denture, each of which contributes an increment to height, which increments are summated at the occlusal plane. Since the occlusal plane marks the junction with the mandible it can be seen that all of this growth would result in a pushing downward of the mandible, away from the cranium, to which it is attached. Further than this, the mandible itself has been shown to be increasing in vertical height by additions to its superior or alveolar margin, and this would again have the effect of forcing this bone down. But we have seen that the lower border of this bone behaves like other planes above it; that is, its angular relation with the cranial base is not disturbed by growth. We can therefore infer that the condyle must be growing at a rate that is equal to the sum of all of the other increments in order to adjust the mandible to the growth of the middle face. One other factor contributes to this adjustment, however. The glenoid fossa is seen to go downward and backward during growth but its rate is so slow that it is able to contribute only a fraction of that added at the condyle. From the fact that there is a slight backward vector to this movement of the joint, it can be realized that the anteroposterior growth of the mandible must be in excess of that of the maxilla in order to compensate for the backward migration of the fossa.

The combination of methods employed in this study, namely, serial roentgenology and alizarination, yields another surprising finding. If one superposes the tracings of successive x-rays of the mandible

On the Growth of the Jaws and the Eruption of the Teeth

on a line representing a tangent to the lower border (Fig. 10), it is found that lines representing the posterior border of the ramus will also superpose. This means simply that the angle formed by the ramus with the posterior border remains constant throughout growth, instead of becoming more acute as has been taught in the past (Fig. 11).



Figure 10

Three tracings of the same mandible showing method employed to study the angle.

THE GROWTH PATTERN AND THE ERUPTION OF MANDIBULAR TEETH

In an effort to study the eruption path of the mandibular teeth various measurements were made on the tracings of successive x-rays of the same individual. As stated earlier in the paper, the first appearance of a developing tooth germ is indicated by what appears to be an area of rarefaction in the bone. At a slightly later date the beginning of calcification of the cusp tips appears, followed by an extension of calcification until the entire crown is delineated. In the case of the mandibular six-year molars, these areas appear first in the ramus at a level considerably above that of the unerupted second deciduous molar. This is the picture at three months of life. Successive x-rays reveal a rapidly changing relation. As the deciduous molar starts its eruptive migration it reaches the level of the crypt of the first permanent molar, which, by this time, is found at the inner angle of the mandible, or that area where the alveolar process meets the anterior margin

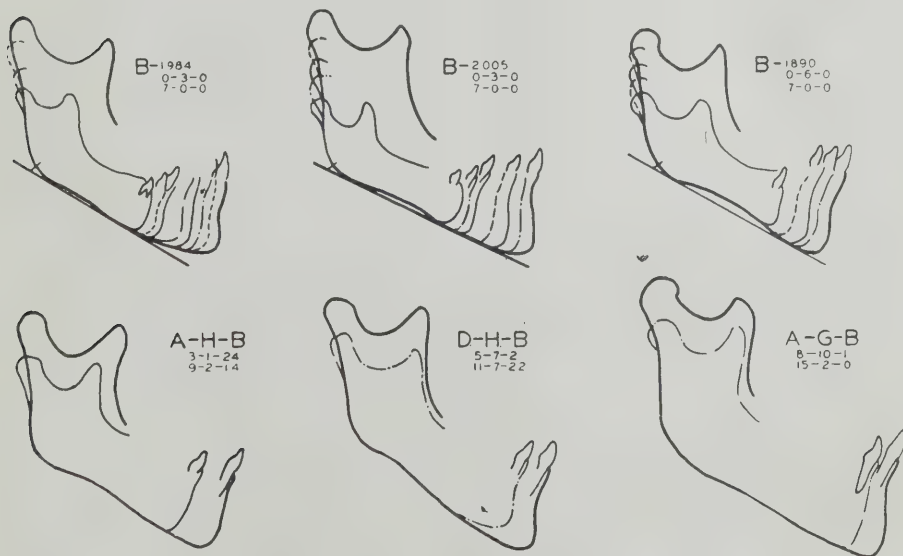


Figure 11

Superimposed series of tracings of mandibles of six different individuals of different age ranges.

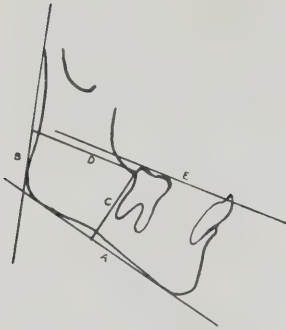


Figure 12

Method employed by Elman to study the relation of the mandibular first permanent molar to the mandible. Lines D and C were measured and plotted. (See Fig. 13.)

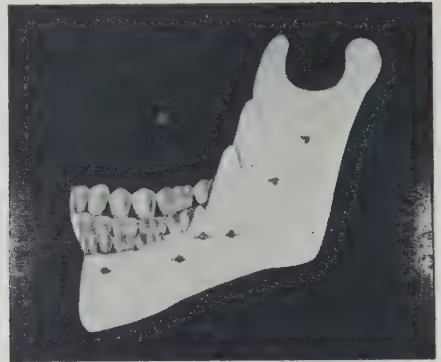


Figure 14

Author's model assembled to show eruptive course of teeth in relation to mandible. Note that eruption is practically vertical.

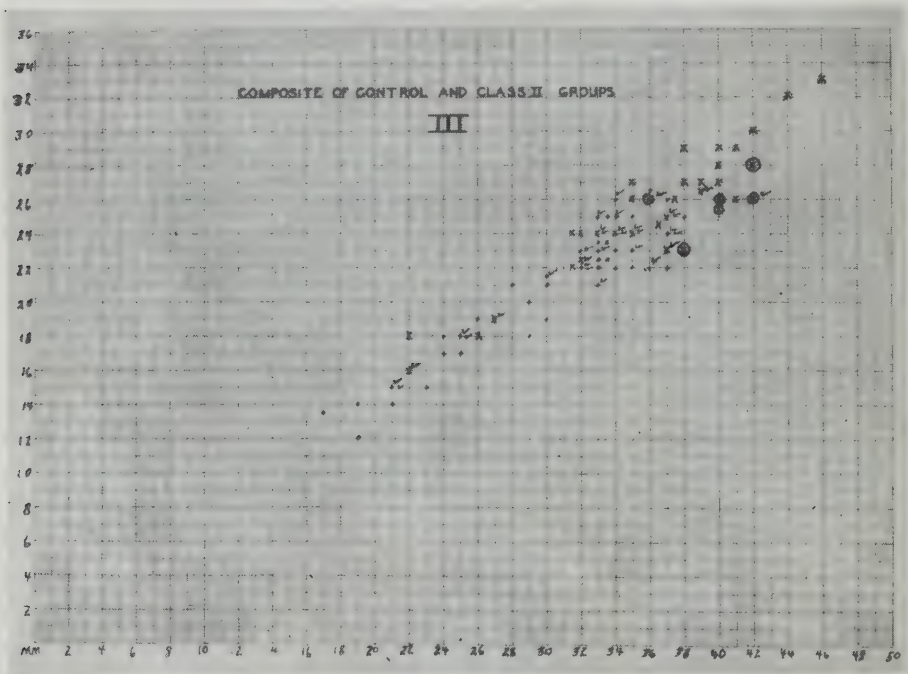


Figure 13

Scatter diagram showing relation of mandibular first molar to mandible in 118 individuals ranging from 3 to 26 years in age.

of the ramus. Some time later we find the second deciduous molar at a higher level than that of the six-year molar and this tooth, its crown pretty well completed, has

now assumed a position well within the body of the mandible. Viewing the above described series of tracings side by side, or even superposing them on a cranial

On the Growth of the Jaws and the Eruption of the Teeth

Distance of the Last Molar Tooth to Distal Border of Ramus

(3 months to 7 years)

Case No.	1893	1897	1932	1941	1984	2005	2009	2027	2035	2070	2165	Mean	
AGE													
0-3-0													
0-6-0	21.25												
0-9-0													
1-0-0													
1-6-0	28. ^e	38.5 ^d		38. ^d	38.5 ^d	39.5 ^d	44. ^d	40. ^d		39. ^d	39. ^d		
2-0-0	31.5	39.		40.75	40.	31. ^e		32.25 ^e	41.25 ^d	40.75			
2-6-0		29. ^e	31.25 ^e	33. ^e	30.5 ^e	35.5	36.25 ^e	35.5 ^e	43.	32. ^e	33. ^e	31.84	
3-0-0	34.	31.5	35.	34.5	32.75	36.5	36.	36.75	34. ^e	33.5	34.		
3-6-0	34.	33.25	35.75	36.5	34.	38.	36.25	38.25	34.25	35.5	34.5		
4-0-0	37.		36.25	36.75	35.25	38.5	37.	39.	36.25	37.5	34.5		
4-6-0	37.25	35.75	37.	39.	37.	40.	38.75	41.75	37.5	39.	36.5		
5-0-0	28.25 ^e	37.	39.5	39.5	36.5	41.	41.	43.		40.	38.		
6-0-0	31.5	40.	40.5	42.5	28.5 ⁶	32.5 ⁶	42.	44.5	41.	32. ⁶	28.75 ⁶	31.65	
7-0-0	32.	30. ⁶	32. ⁶	34.25 ⁶	30.5	34.25	35. ⁶	35. ⁶	32. ⁶	33.	32.5		

(6 months to 8 years)

Case No.	2019	2130	2078	2173	2207	2108	2058	2049	2017	2125	Mean		
AGE													
0-6-0													
0-9-0													
1-0-0													
1-6-0		38. ^d	47. ^d	35. ^d			36. ^d		36. ^d				
2-0-0		39.	31. ^e	37.		40. ^e	28.5 ^e		37.5	28. ^e	31.1		
2-6-0	34. ^e	30.5 ^e	36.25	32. ^e			32.			32.5			
3-0-0	38.	31.	37.5	33.	32.5 ^e	32.5 ^e		34.25		34.			
3-6-0	38.	33.5	39.	33.5	35.	35.	35.	34.	32.	35.			
4-0-0	37.5	34.	40.	33.5	35.5	36.	35.	35.	32.	36.			
4-6-0	40.	35.	40.75	34.25	36.5	36.5	37.	35.	34.	37.			
5-0-0	41.	36.		36.	38.	37.5	39.	38.	35.	38.			
6-0-0	43.25	38.25	31. ^e		40.	39.	28.5 ⁶	39.5	35.5	28.75 ⁶	30.65		
7-0-0	32.5 ^e	29. ⁶	34.25	27.5	41.	41.	30.	29.5 ⁶	27.6 ⁶	31.25			
8-0-0	35.	31.	36.	30.5 ⁶	33. ⁶	32. ⁶	32.25	31.	28.	33.5			

Distance of the Last Molar Tooth to Distal Border of Ramus

(6 years to 14 years)

Case No.	255	1681	2471	2600	2798	2384	2037	2032	2214	2216	Mean		
AGE													
6-0-0			29.25 ⁶				27. ⁶	28.25 ⁶					
7-0-0	28.25 ⁶	32.5 ⁶		32.75 ⁶	31.25 ⁶	30.75 ⁶			30.75 ⁶	32.	30.27		
8-0-0													
9-0-0													
10-0-0													
11-0-0													
12-0-0			29.5 ⁷										
13-0-0	29. ⁷	32. ⁷		33. ⁷	32. ⁷	30.25 ⁷	27.5 ⁷	27.25 ⁷	28.5 ⁷	30.5 ⁷	29.95		
14-0-0													

"d" denotes first deciduous molar
 "e" denotes second deciduous molar
 "6" denotes first permanent molar
 "7" denotes second permanent molar

Figure 15

plane of reference, gives the impression that the six-year molar, starting in the ramus, has burrowed its way downward and forward to assume a new position in the body of the mandible. Such is not the case.

Going back to our alizarine findings we remember that the alveolar process is a rapidly growing part of the mandible. The deciduous teeth lie beneath this margin and, were it not for the eruption process, would be covered by an ever increasing thickness of bone. The teeth, however, driven by a little understood force, migrate upward at a faster rate than the bone is growing so that they ultimately meet and pass the free margin. We say they "erupt" into the mouth. This rapid migration of the deciduous teeth and the vertical growth of the body of the mandible are responsible for the illusion that the first permanent molar is sinking into the bone. Actually it is doing something quite different, as will be seen shortly.

The impression that this same tooth is moving forward is explained in a similar manner. The mandible is growing in length by additions to its posterior border, which growth would increase the antero-posterior width of the ramus to an equal extent. This does not occur because the anterior margin of the ramus is trimmed back by resorption at a rate that is only slightly less than that of the deposition in back. In this manner the molars that make their appearance first in the ramus are slowly uncovered by the retreat of its anterior margin without having to migrate at all.

Subjecting the mandible and its molars to actual measurements yields interesting information regarding the relationship between them. If, for instance, one

measures the distance of the last molar in occlusion from the posterior margin of the ramus, on a line parallel to the occlusal plane and as soon as possible after occlusion with its antagonist has been established, he will obtain the same reading for the second deciduous and first and second permanent molars (Table 1). In other words, each succeeding molar erupts at the same distance from the posterior margin.

If one erects a perpendicular from a tangent to the lower border of the same tooth point employed above (the distal contact) (Figs. 12 and 13), he finds that regardless of age or of stage of eruption the ratio between the two measurements is always the same and may be expressed as follows:

Distance of tooth anterior to ramus:
distance of tooth above lower border
 $\times 3 : 2$.

Since this ratio is obtained whether one measures it at three months of life or at twenty-six years, it follows that the six-year molar, although appearing to sink down and go forward, would seem to be going upward and forward in relation to the mandible (Fig. 14). A similar study of the mandibular incisor shows that this tooth seems to follow an upward and forward course.

Actually these teeth are not going forward at all, except in their relation to the cranium. Growth is occurring at superior and posterior craniofacial junctions, resulting in a downward and forward movement of the bones that house the teeth. If we dissociate the maxilla and mandible from the cranium and study only the tooth-jaw relations, we find that eruption is in an almost vertical direction (Fig. 15).

"Such is life! On his birthday before their marriage, she gave him a book entitled 'A Perfect Gentleman': after they had been married a year, she gave him on his birthday a book entitled 'Wild Animals I Have Met'!"—Medley.

President A. D. Angus' Address

AT FALL CLINIC OF MONTREAL DENTAL CLUB

THE war has taken its toll from the ranks of the practising dentist by the large enlistment in the Canadian Dental Corps, and the profession may well be proud of the part it has played in forming and manning such a splendid organization.

In the last war Canada was the first of the nations involved to form a Dental Corps and in this war due to the foresight of the Canadian Dental Association a complete plan was ready to be put into operation when needed.

I cannot emphasize too strongly the importance of every dentist in Canada giving his support to the C.D.A. which through its officers can bring pressure to bear in all matters affecting dentistry and its relation to the public health of the nation.

We look with admiration at the capable administration of the C.D.C., also on the splendid part played by every dentist in the Corps in the performance of his duty—all of which entails a very special obligation on those of us who are left to serve the needs of the civilian population.

And now I wish to point out some of our obligations. First of all the ethics and standards of the profession must be upheld under the strain of increased pressure of work. On no account must inferior dentistry be practised, as we must not sacrifice the standard of our work, but if necessary we must curtail our outside activities.

The profession has an obligation with regard to a movement on the part of the Department of Pensions and Health to bring in some form of Dental Social In-

surance. This should be of the greatest importance not only to the public but also to every practising dentist, and I wish to say here that if the Government looks for success and co-operation in any national scheme of this nature it must take the profession fully into its confidence and be advised by the profession as to what form this insurance should take, as I would consider it disastrous if any scheme were launched behind closed doors and the profession informed only after it had become an accomplished fact. The profession should be fully consulted through every responsible dental organization and not limited to a handful of political opportunists.

We have now completed the first century of organized dentistry. What will happen in the second century will depend upon the vision and stability of the profession as a whole, and whether we honour and value the heritage which has been handed down to us.

I would like to warn the profession about what I consider a menace to our professional skill. I refer to the increasing tendency to relegate to the commercial laboratory the direction of our prosthetic cases. I do not mean to disparage in any way the commercial laboratory which does splendid work when proper direction is given by the dentist but the danger to the profession lies in bringing into a dental office technicians to take impressions and who even go so far as to give advice regarding the procedure to be followed.

I feel certain that the commercial laboratory does not wish to deal with patients, but it is becoming a custom, on

the part of some dentists, to refer patients directly to the laboratory to have dentures inserted, adjustments made, and repairs done. This practice is becoming so prevalent that the patients look to the laboratory and will soon begin to wonder why they should pay a fee to the dentist. You will see the encouragement to the public to patronize the technician who is carrying on an illegal practice. The action taken by some states and provinces to make it illegal to make a prosthetic piece without a written prescription from the dentist should help to stop illegal practice by the unqualified.

The public still looks to the dental profession and to it alone, I hope, to replace aesthetically and efficiently its lost teeth. The road to progress is not the easiest one, but rather the pathway to greater individual effort.

I would like to quote here from a paper read by General Leigh C. Fairbank of the American Army, at the 82nd Annual Meeting of the American Dental Association, held in Cleveland. "Two serious problems confronted the Dental Corps—namely administration of the laboratories and the procurement of trained personnel. It was determined that dental officers with special training would be in charge of all laboratories and that these officers would completely control and dominate the laboratory service. This meant co-operation between the dental clinics and the laboratories and complete control of the laboratories and technicians. In other words there is a continual flow of cases, models, bite-blocks, etc., from the clinic to the laboratories. The dental officers in charge of the laboratories survey each case and their instructions in fabricating the replacements are carried out by the technicians. In no way are the technicians in command of the situation. Care-

ful professional supervision and direction of the entire laboratory service assure us of the highest standards; and achievements beyond our fondest expectations have resulted."

Every dentist knows the danger to the patient of any replacement not designed and inserted by the dentist himself and should keep himself thoroughly familiar with every step in their processing.

The tendency on the part of some to constantly compare dentistry with medicine is a fallacious one. For instance, although preventative dentistry has made some progress, we are still far from the time when the practising dentist can sit at his desk, write prescriptions, give advice regarding diet and collect a fee for it.

Medicine, like dentistry, has its many branches, but all directed by qualified graduates and all these branches jealously guarded. In following our profession we must keep our vision clear and not lose our realism in a practical world.

Let those of us who have the desire and ability for research devote ourselves to it. The dental school should be supplied with funds by the Government so that every facility for carrying out research work will be made available to us.

It is a strange paradox that governments persistently ignore providing subsidies for this important branch of the profession and at the same time expect immediate results during an emergency, such as this war. However the technical side of dentistry must always remain of paramount importance to the practising dentist. May ideals and vision go hand in hand with common sense!

Let us go forward with all these requirements to a new and better world after the confusion and strife of war are ended.

"Faith and fear cannot exist in the same mind; you must choose between them."



PRINCE EDWARD ISLAND

*D. T. Waye, Charlottetown*

NOVA SCOTIA

*S. G. Ritchie, Halifax*

NEW BRUNSWICK

*W. C. Carruthers, Saint John**Editor—M. H. GARVIN, Winnipeg*

A S S O C I A T E E D I T O R S

QUEBEC

*E. M. Laurin, Montreal*

ONTARIO

*T. R. Marshall, Toronto*

MANITOBA

*J. F. Morrison, Winnipeg*

SASKATCHEWAN

*F. C. Harwood, Moose Jaw*

ALBERTA

*John Clay, Calgary*

BRITISH COLUMBIA

*H. M. Cline, Vancouver*

The Dental Hygienist

In 1929 the writer had the privilege of addressing the Georgia Dental Hygienist's Association, in Atlanta, at its annual convention. Before and ever since that time there has never been the slightest doubt in my mind that the dental hygienist was here to stay, that she was capable of rendering and was rendering a marvellous service, not only to the dentist, but to institutions where she was employed and to the public who were fortunate enough to contact her ministrations.

Unfortunately Canadian laws do not permit of her employment as yet, although there are a great many dentists in this country who have studied the problem and are convinced that to license the hygienist would be a forward step in the development of our profession. And so it was with peculiar interest that the writer has read favourable articles on this subject in several of the world's leading dental journals within recent months.

In the British Dental Journal of August 15, 1942 the editor states that the Air Ministry, animated by the desire to spare no pains to maintain the physical fitness of the flying personnel at the highest possible pitch of perfection has

instituted a scheme for the training of a limited number of women as "dental hygienists" to carry out prophylactic treatment for members of the Royal Air Force. The editor goes on to say that should the experiment prove the value of the dental hygienist they would be foolish to ignore the lessons to be learned from it, and by so doing be possibly deprived of a valuable auxiliary service in the fight against dental disease.

In the same issue of the British Dental Journal Mr. A. E. Rowlett favourably known to very many dentists on this continent, states that the dentists who had employed hygienists whom he had met on his recent trip to America were unanimous in their appreciation of the value of the service rendered by these girls; that no fear whatever was expressed that the hygienist would encroach upon the domain of the dental surgeon; that in the experience of these men the hygienist carries out her special task of cleaning the teeth more thoroughly than a dentist, and more economically for the patient, as her time is not so valuable. Mr. Rowlett concludes his remarks with these words: "I would most earnestly beg of the profession in this country to give this matter its serious and sympathetic consideration, as I am convinced that the introduction of dental hygienists, properly trained and adequately controlled, would provide a most valuable Auxiliary Service to the profession, particularly in their capacity as health educators of the community."

In the September, 1942, issue of the Journal of the American Dental Association there appeared an editorial entitled "The Dental Hygienist in Dental Practice". The editor states that from the very origin of this movement he has yet to know of but a single instance where the hygienist has infringed upon the dental laws, and that these professionally minded women have been a credit to dentistry, not only in the efficiency of their work, but in their valuable aid to the dentist. It is further stated that the dentist who is not employing a hygienist is failing to avail himself of a mouth health service that will enable him to greatly enlarge his clientele and much enhance the benefits of his service; that he can readily care for more than twice as many patients during the year if they receive prophylactic care from the hygienist supplementary to the operative care of the dentist; that this service can mean much as an economic factor in dentistry, which today is considered inordinately expensive by the public generally.

Such opinions as have been thus expressed cannot go unheeded. If the hygienist plays the part in modern dental practice which these leaders claim for her then the Canadian profession is missing something in not, at least, investigating the matter most thoroughly. I would like to quote from the address already referred to, given at Atlanta as follows: "Let us picture a man with an income of two or three thousand dollars a year or even much less than that, a wife and several children to provide for, and all members of this family requiring dental service. On the other hand we have the dentist who has spent years of study and thousands of dollars for education and equipment. The dentist must receive an adequate reward for this sacrifice. On

the other hand, the family we have described, and the country is full of them, must have healthy mouths.

"How is the dentist going to solve these problems? Not by making his own instruments, his own alloy, even some of his own furniture as many dentists used to do, but by obtaining the service of as many others as possible, by so equipping his office and so standardizing his technique as to be able to do the maximum amount of work in the minimum amount of time. It is here that the hygienist can render the greatest service to the dentist in private practice. There is also a wonderful field in hospitals, charitable institutions, industrial institutions, Red Cross societies and schools. The hygienist too has a large part to play in educational work, in creating an enthusiasm among children and adults, for dental service."

What was said thirteen years ago still holds good, only in more intense form, as we are facing a long and tedious war. We must deal with the problem of giving our armed forces the very best that dentistry can provide and at the same time care for the urgent needs, at least, of our civilian population, and all this with a dental population which seems to be dwindling in numbers as the war progresses. Some one has said "Our destiny changes with our thought; we shall become what we wish to become, do what we wish to do when our habitual thought corresponds with our desire." O that we may not be so busy with ordinary affairs that we will not have time to consider the benefits accruing from greater achievements!

CORRESPONDENCE

CANADIAN DENTAL CORPS

Montreal, Sept. 14, 1942.

To Colonel Layton Ralston,
Minister of National Defence, Ottawa.

On behalf of the Canadian Dental Association and its 4,200 members spread over this Dominion, I am making this most urgent request for your consideration,—namely that the Director of Dental Service for Army, Navy, and Air Force should hold the rank of Brigadier, and that provision be made for a limited number of senior Lieut.-Colonels to be promoted to the rank of Colonel. Attached, you will please find a memorandum concerning those appointments from the dentists of Canada who wish to recommend this urgent request for your consideration.

MEMORANDUM

1. The Director of Dental Service has held the rank of Colonel since December, 1939.
2. The Canadian Dental Corps has increased

to approximately 900 officers and 2300 other ranks, and continues to grow rapidly.

3. The Director of Dental Service is also Officer Administering the Canadian Dental Corps, which serves not only the Army, but also the Navy and the Air Force. In addition, it serves personnel of the British Commonwealth Air Training Plan in Canada, Royal Naval personnel calling at Canadian ports, as well as personnel of the Armed Forces of allied nations presently serving in Canada. Prisoners of War, now arriving in Canada in large numbers are also a responsibility of the Canadian Dental Corps.
4. The Director of Dental Service for the Army Dental Corps in England, serving the Army only, holds the rank of Major-General, with 5 senior officers with the rank of Colonel in charge of zones, serving under him.

The Director Dental Service for the R.A.F. in England holds the rank of Air-

Commodore—equivalent to Brigadier in the Army rank.

5. The Canadian Dental Profession sponsored the formation of the Canadian Dental Corps before the outbreak of war, and have rendered constant and loyal support ever since. The profession feels that the organization and administration of the Canadian Dental Corps compares favourably with other Services and points with satisfaction to the report of the Parliamentary Committee which investigated the dental service, along with other services in 1941. The report was exceedingly satisfactory, and the profession feels that the Canadian Dental Corps has at its head, capable and highly respected members of the profession, who have also had previous military experience

during the last war and have served continuously since the outbreak of the present war.

6. The R.C.A.M.C. now has three brigadiers at Headquarters in Ottawa as well as two overseas. The number of full colonels is unlimited, whereas, the Dental Corps has at present only one full colonel—the Director.

In closing let me assure you that this is an unanimous request from each and every province, and your favourable consideration will give increased impetus, not only to the Dental Corps, but to the whole Profession of Dentistry in this Dominion.

Signed: Arthur L. Walsh,

President Canadian Dental Association.

DENTAL CORPS NEWS

Major R. H. Stanford

Major Robert Harold Stanford, D.D.S., was born in Halifax, N.S., in 1896.

He was graduated from Dalhousie University in 1925 and practised in Sheet Harbour, Great Village, and later in Dartmouth, Nova Scotia.

In 1915 he enlisted in the Imperial Army with which he served both in France and Italy.

Major Stanford was appointed to the Canadian Dental Corps in March, 1940, since when he has been kept busy rendering dental treatment to members of the Royal Canadian Navy.

He was until recently Assistant District Commissioner of Boy Scouts for Dartmouth area.

He is a member of the Anglican Church.

His wife and two sons are now living in Wolfville, Nova Scotia.

Archery, hunting, and chess are his main hobbies.



Lieut. J. B. Power

Lieut. J. B. Power enlisted with 22 Coy., C.D.C., in Nov. 1939. Previously he was in the Militia for three years in the H. Q. Orderly Room of the Q. O. R. of C.

He was commissioned as a 2nd Lieut. Administrative in March, 1942 and in July, 1942 was promoted to Lieut. and appointed Adjutant of 22 Coy., C.D.C.

He was educated at De La Salle and St. Michael's College. At the outbreak of war he was employed in the Accounting Dept. of H. R. Bain & Co., members of the Toronto Stock Exchange.

Lieut. Power is married and lives in Toronto.



2nd Lieutenant B. J. H. Marchant

2nd Lieut. B. J. H. Marchant has recently been commissioned in the Canadian Dental Corps. He enlisted as a private in October, 1939, at Quebec, and previous to receiving his commission was stationed at Debert and Ottawa.

2nd Lieut. Marchant is now the quartermaster at No. 3 Training Command Headquarters.



**M.D. 10, Headquarters Winnipeg
Capt. W. R. Cunningham—Hong Kong**

In reply to an enquiry, Mrs. Cunningham has sent to Lt.-Col. Wright a letter about the letter from her husband, and we quote part of it:

"This is the main body of the letter,—'By courtesy of the Japanese authorities we are being permitted to write home. I know it will be a great relief for you to hear from me, for I'm sure you have worried a great deal about me. So first of all, let me say, "Don't worry any more." I'm in the best of health—never felt better—haven't lost any weight, and have a real tropical tan. Our food is good and we are quite comfortable.

'Something about our camp. It is composed —(Censored). The Japanese authorities have kindly allowed us to have our dental equipment in the camp and I spend half the day with the dental parade. The rest of the day we put in playing soft ball, volley-ball or reading—we have a good library.

'Also we officers get paid according to the corresponding rank of the Japanese army so we can buy anything we need. We can write but one letter a month.'

"This would indicate that Capt. Spence works the other half of the day, as they did on the way over.

"The letter was printed in block letters but the signature was written. The part censored was entirely cut out. The address on the back was: Hong Kong Prisoners of War Camp, 'H' Camp, W. R. Cunningham."

Two welcome additions to the operating staff, recently, are from the United States: Capt. H. C. LaBissoniere comes from St. Paul. He served with the American troops in France during the 1914-18 war, has been a football coach and referee and has two children. Capt. T. R. Allen is also a veteran of 1914-18 and hails from Minneapolis. He has had considerable military experience and has had post-graduate work in bacteriology, x-ray and oral surgery.

Dr. J. A. Dean, of Kenora, Ontario, is the latest dentist to join the staff from this District.

The Ladies' Auxiliary is sending parcels to all members of No. 30 and 38 Coy's overseas.

The following work done in one month by one operator, constitutes a record in this Company and possibly others. A new Veteran's Guard company, quartered at Fort Osborne Barracks, is responsible for this outburst of dentures by Major Grahame. It is more remarkable when one realizes the individual care and technique used, resulting in most cases requiring no adjustment after insertion. Efficiency was tested with peanuts. This is the report for September:

Full Dentures (14')	70 cases
Partials	2 cases
Rebases	2 cases
Repairs	4 cases
Prophylaxis	8 cases
Fillings	30 cases

BOOK REVIEW

Accepted Dental Remedies, Eighth Edition, Published by the Council on Dental Therapeutics, American Dental Association, 212 East Superior Street, Chicago, Illinois. Price \$1.00.

This book contains a list of official drugs selected to promote a national dental materia medica and descriptions of acceptable non-official articles. The descriptions are based in part on investigations and in part on evidence

or information supplied by the manufacturer or agent all of which has been examined critically.

Some of the products described in previous editions have been deleted and a number of articles have been added to the list.

This book should serve as a useful guide to the practising dentist in his choice of medications.

M.H.G.

"Write your name in kindness, love, and mercy, on the thousands with whom you come in contact, and you will never be forgotten."—Chalmers.

NEWS FROM THE PROVINCES

ALBERTA:

Edmonton Dental Society

The first fall meeting of the Edmonton Dental Society was held at the MacDonald Hotel, October 6.

Dr. H. A. Gilchrist gave a paper on "Dental Fluorosis and its Relation to Mottled Teeth". Some years ago the University of Alberta made a careful study of the incidence of this condition in Alberta, plotting out the considerable number of areas throughout the province where the drinking water contains sufficient fluorine to produce "mottled enamel".

SASKATCHEWAN:

Dental Nurses and Assistants

The initial supper meeting of the fall season of the Regina Dental Nurses' and Assistants' Association was held October 5. The following officers were elected for the ensuing year: President, Mrs. S. Julei; Vice-President, Mrs. C. Thacker; Secretary-treasurer, Miss Betty Wright; Press Correspondent, Miss Lucille Hammond; Social Committee, Mrs. N. Scott and Miss Dorothy Munn; Sick and Visiting, Miss Collette Dunk and Miss Ruth Morrison.

A vote of thanks was extended to Mrs. O. Blake the retiring President.

MANITOBA:

Winnipeg Dental Society

Acrylics in Operative Dentistry was the subject wisely selected to be presented to the Society during the afternoon and evening of September 25, by Dr. La Mar Harris of Chicago, one of the best known exponents of Acrylics. Unfortunately for all concerned Dr. Harris chose for his means of getting to Winnipeg a mode of transportation which is contraindicated under certain conditions just as Acrylics are and so did not arrive on the scene until late in the evening. However the interest in the subject was such that the audience, which included a goodly representation from outside of Winnipeg, after an excellent dinner at the Fort Garry Hotel, whiled away the waiting hours under the leadership of Dr. Garnet Leckie and helped Sweet Rosie O'Grady Pack all her troubles in an old Kit

Bag, On the Side Walks of New York and Keep the Home Fires Burning to welcome Dr. Harris when he arrived about 9 o'clock.

That the subject was well presented and the audience interested was indicated by the late hour at which the meeting broke up and everybody went home glad that he had waited and wishing that Dr. Harris would come again and stay longer.

Letter from China

On October 15 Dr. and Mrs. W. G. Campbell of Winnipeg received a letter from their son Dr. Gordon Campbell, a former Winnipeg dentist and now of West China Union University. The letter bore a three cent Canadian postage stamp and was received in exactly one week after it was written. Previous letters had taken six to eight weeks to reach Winnipeg. The secret of the letter's quick transmission was due to the fact that Dr. Campbell had met Wendell Wilkie and had done some dental work for members of the Wilkie party. The letter was brought to this country by the plane which carried Mr. Wilkie home and was mailed subsequently from Edmonton.

Dental Nurses and Assistants

Many new members joined the Winnipeg Dental Nurses' and Assistants' Association at its opening meeting which was held on September 14, in the St. Regis Hotel. Miss Jean Gordon, the President, was in the chair.

Miss L. C. Veal presented a cheque to the Association for the amalgam scrap which had been collected during the past year. We were reminded to save our tinfoil which is given to the McKinnon Guild which in turn gives it to the Children's Hospital.

Miss Jean Gordon who was delegate to the Ontario Dental Nurses' and Assistants' Association Convention related some of the highlights of the convention. She also presented a paper which was given at the convention by Mr. Frank Dowsett, "Let's Use the Explorer". This paper was very much enjoyed.

The Winnipeg Dental Nurses' and Assistants' Association met for its regular monthly dinner meeting on October 5, with Miss Jean Gordon, the President, in the chair.

A short business meeting was followed by two very interesting papers, given by members of the Association. The first, "Fillings" by Miss Juel Grose proved especially beneficial to the new members attending, who are just starting out in their work. Miss Grose outlined the types of cavities and the different materials used. The second, "Oral Surgery" by Miss Jean Gordon was presented in a very interesting manner. The meeting adjourned after a brief sing song.

ONTARIO:

Northern Ontario Dental Association

Thirty-three members attended the 3rd Annual Convention of the Northern Ontario Dental Association held at North Bay, September 12. The following speakers took part: Lieut.-Colonel G. L. Cameron, Dr. George A. Morgan, Dr. Don W. Gullett, Dr. H. S. Thomson, and Dr. F. A. Blatchford.

Dr. M. V. J. Keenan of Sudbury was elected president and Dr. W. G. Mahaffy of Copper Cliff, secretary-treasurer. Sudbury was named as the 1943 convention city.

Letter from Doctor Agnew

Dr. R. Gordon Agnew of Chengtu, China, in a letter to Mrs. Agnew tells of an unusual incident at sea in these days of submarine warfare. The scene of the story is somewhere off the Atlantic seaboard. Dr. Agnew writes—

"We had a very narrow escape on the Atlantic when a submarine came up to attack us. We had gotten through the submarine nest just after starting out, although several ships around us were attacked; but one night, about 1.30 a.m. a submarine came up on our port side, so close that the naval men considered it a sure hit. But our ship was saved in a most remarkable manner. When the watch on the deck, straining their eyes through the darkness, spotted the submarine, they called the officer of the naval guard, who was on the bridge. He at once roared to the helmsman to start zigzagging (we had temporarily stopped zigzagging, although we had done it nearly all the way). The helmsman was excited and swung the wheel to starboard so violently that he damaged the mechanism, burnt out the electric coil which controlled the

automatic steering apparatus, and jammed the rudder. But the rudder by that time was away around at an acute angle and the ship, at full speed swerved around in a sharp circle. Then,—and it seems more like fiction than a sober narrative of actual happening—the ship, swinging about came head on toward the submarine, completely out of steering control. The officer of the submarine crew must have been astounded by this turn of events; his ship rises to torpedo a seemingly harmless freighter; suddenly the freighter, instead of trying to get away, swerves about at full speed and rushes at the submarine. Apparently in consternation he gave up his plan of torpedoing us, and plunged beneath the surface of the water, and was not seen again! Believe it or not. We waited for the torpedo to strike—I was ready for emergency medical treatments in case we did not have to take at once to the boats which were swinging, ready, on the davits, (I was Medical Officer for the ship; we had long before arranged battle positions for each person)—and our ship swung helplessly in circles in the water—a perfect target, had the submarine crew only known—until the damaged rudder was repaired and we were able to rectify our course.

"We waited all night, expecting that the sub would return, recognize its error and attack again; especially at dawn we awaited its coming (dusk and dawn are favourite times for sub attacks because of lighting conditions) but apparently we had thoroughly frightened it away, for the commander must have thought that we were going to ram the submarine or drop depth charges on it.

"—And so ended a remarkable experience and escape."

Workmen's Compensation Board

From time to time it has been brought to the attention of this Board that jaw fracture cases could be treated best by physician and dentist working together. It has been pointed out that a dentist is trained in designing and making appliances that will stabilize the fractured members with a view to restoring function of the teeth. Naturally, when a workman has an accident the physician is called at once. In cases of jaw fractures it has been suggested that a dentist be called in consultation as is done in the Canadian Army.

Recently this Board has considered this suggestion favourably and henceforth it will suggest to physicians reporting a jaw fracture that they call a dentist in consultation.

Dental Nurses Alumnae

On October 13 the Dental Nurses' Alumnae Association held its annual Mother and Daughter banquet at Diana Sweets, Bloor St., Toronto.

President Miss Anna Lindsay welcomed the members and guests. Mrs. H. J. Mullett, returned missionary of West Union University, Chengtu, China, gave a very inspiring talk on "The Women of China" illustrated by work done and worn by the Chinese women. The speaker was introduced by Miss Betty Broadrib and Miss Marion Gwynn gave a vote of thanks.

A message was read from Capt. Harry W. Appleton who has recently returned from England to take a staff course, telling the girls that he had seen the Dental Nurses' Alumnae Mobile Dental Clinic in use in England.

Announcements of the special meeting regarding the C.W.A.C. and of the dance in November were made by the President, after which a sing song of old familiar songs was enjoyed.

Miriam Jennings,
Publicity Convener.

Ontario Dental Nurses' and Assistants' Association

Patriotic Donators and Knitters Club:—

The P.D.K.C. our chartered provincial war club under the guidance of a very capable convener, Leta B. Blaber of Toronto, continues to operate for another year to further its efforts in sending comforts overseas.

There are various means of raising funds such as, rummage sales, mile of nickels, raffles, donations, etc. This money purchased wool for our knitters and these comforts have been sent to the Canadian soldiers overseas. To date thirteen consignments have arrived safely. The officers and men of the Canadian Dental Corps have also been recipients of parcels from our club. Many letters of thanks are on file. The valuation of the comforts given to our Canadian men in the three Forces is approximately ten thousand dollars (\$10,000).

The following is a copy of a letter received in reply to our cable of sympathy to the Royal Family, upon learning of the death of H.R.H. The Duke of Kent on Active Service, August 25th.

Marlborough House
London S.W.I.
September 5th, 1942.

"The Private Secretary to Queen Mary has received Her Majesty's command to thank Mrs. J. R. Blaber very much for her kind telegram of sympathy sent from the women members of the Patriotic Donators and Knitters Club."

Leta B. Blaber,
Provincial War Convener.

Toronto Affiliated Association

The Toronto A.A. held its meeting in the Royal York Hotel, the President, Doris Gregory, presiding.

This meeting marked the Third Anniversary of the P.D.K.C. A letter from Her Majesty, Queen Mary was received and read by Leta Blaber, in acknowledgement of our cable. Dr. Elizabeth Chant Robertson our charming guest speaker was introduced by the President. Dr. Robertson chose the general subject of "Food and Health," which we all found most interesting and beneficial.

Marjorie Holmes, Sec.

Windsor District Affiliated Association

The monthly meeting was held in the Canada Life Building, the President, Winnifred Grier presiding.

The President gave a summary of the Provincial Executive Meeting held in London recently. The Presidents were advised according to the new constitution that the Chapters are now called Affiliated Associations of the Ontario Dental Nurses' and Assistants' Association.

Tickets for a Christmas Raffle were given to the members and it was decided to give the P.D.K.C. seventy-five per cent of the proceeds.

A round table discussion followed, led by Winnifred Grier and Janet Gunn, on the "Duties of a Dental Assistant".

Dorothy Bailey,
Secretary.

London Affiliated Association

A very formal meeting of the London D.N. & A.A.A. was held at the office of Dr. D. A. Campbell, the President, Dorothy Innes, presiding.

Arrangements were made for a successful Ontario Executive Meeting held in London October 3 and 4. The London members being hostesses at a lovely dinner served at Cobblestone Inn.

We were happy to welcome Dorothy Clark of St. Thomas as a new member.

Plans for war work and the membership drive were discussed.

At the close of the meeting our hostess, Dorothy Innes, served refreshments.

Margaret McAuliffe,
Secretary.

Ottawa Affiliated Association

The Ottawa D.N. & A.A.A. held its monthly meeting in the reception room of Doctors Beattie and Dixon.

Dr. S. G. McCaughey, our guest speaker, stated that "any dental nurse or assistant who could invent a gadget for catching gold filings falling from an inlay while being ground, should stand in line for a bonus from her employer."

At the close of the meeting Heather McGill and Hildred Randall served refreshments.

Olive Cumming,
Secretary.

The Ontario Dental Nurses' and Assistants' Affiliated Associations Executive is going ahead with plans for the Twelfth Annual Convention, May 17-18-19, 1943, and unless the government decides against it, we will all meet again next May. Begin your plans now and send a delegate from your Association to the Ontario Convention.

Irean Checkley Bruce,
Provincial Publicity Convener,
O.D.N. & A.A.A.

Toronto Ladies' Auxiliary

The Ladies' Auxiliary to the Academy of Dentistry and Canadian Dental Corps M.D. No. 2, opened its season with a luncheon at the Granite Club on Sept. 17. Mrs. K. R.

Harris, President of the Auxiliary presided at the meeting that followed. Lieut.-Col. D. J. Ferguson, district dental officer M.D. No. 2 and Major Lloyd Stirling, command dental officer No. 1 Company thanked the auxiliary for the work being done for the boys in the Dental Corps. Mrs. G. W. Grieve gave a report on the work accomplished by the sewing group, Mrs. A. J. McDonagh, wool convener, reported appreciation of woollens received in Newfoundland and overseas. Mrs. E. T. Guest reported \$404.84 collected from scrap gold during summer months, making a total of \$1,297.75 in the 10 months since its inauguration. Mrs. J. W. McDonald reported 111 boxes sent to a staggered list of the men during the summer months. Mrs. J. L. Dickson was appointed convener for the Christmas boxes.

The October meeting was held on Oct. 15th in Eaton's Round Room, the meeting being convened by the East group. Dr. Norma C. Ford of the Department of Biology, University of Toronto, spoke on "Your Teeth and Heredity," illustrated with slides. Mrs. J. S. Lapp thanked the speaker. There was a shower of gifts for the overseas Christmas boxes. Returns from the "Mile of Pennies" brought the total to date to \$294.94.

Toronto Academy of Dentistry

The annual Academy dinner held at Eaton's Round Room, College St., on October 21, was the opening session of another year's activities. President Dr. Lloyd M. Grose presided as toastmaster. Beside him at the guest table were well known and familiar faces of Toronto dentists because of their position in public, educational and professional life. Some of them were Mayor Conboy, President Cody, Dean Mason, Dr. Frank Blatchford, Dr. D. E. Shultis, Lieut. Col. D. J. Ferguson, Lieut. Col. Nattress, Dr. Samuel Johnson (Academy of Medicine), Alderman Dr. Gordon Millen, Dr. J. H. Duff and Dr. Arthur Ellis.

Dr. Grose welcomed new members and asked for co-operation and participation in all activities of the society. With a measure of pride he pointed out the Academy continues

to grow in membership with this year making another new record.

President Cody of the University of Toronto and Mayor Conboy of the City of Toronto spoke briefly. Capt. E. T. Guest presented Dr. S. A. MacGregor, the retiring president with the Past President's jewel, a token of honour and esteem awarded to each president by the members of the Academy on completion of his term of office.

A feature of the evening was the presentation of an Honourary Life Membership in the Academy to Dr. Harold K. Box by Dr. Alvin Snell. This honour was conferred on Dr. Box as a recognition of his untiring devotion to advancement of dental science as his many original contributions bear out in fact. Dr. Box well merits the esteem and recognition of his colleagues in Toronto who no doubt bespeak the good wishes of many more Canadian and American friends.

Mrs. K. R. Harris, President of the Ladies' Auxiliary to the Academy and to the Canadian Dental Corps was a guest of the meeting and as a token of recognition was presented with a bouquet of flowers by Dr. Charles McLean.

The guest speaker of the evening was Dr. James K. Pollock, Professor of Political Science at Ann Arbor, Michigan. He was presented by Dean Arnold Mason. Professor Pollock's subject was "Understanding Soviet Russia". He spoke of Russia's size, one sixth of the earth's surface; her population representing so many political groups with varying racial characteristics; the great effort and sacrifice these people are making for the cause of freedom and the united nation's cause; and finally referred to the ideals of these Russian people; we may not agree with all, but "We have to live in the same world as the Russians do," he said, "So let us get rid of our prejudices and make an effort to understand her problems and her viewpoint."

Dr. D. W. Gullett in a quiet, impressive way expressed the thanks of the meeting to Professor Pollock for his address.

QUEBEC:

Montreal Dental Club

Over 200 members attended the very successful 18th Annual Fall Clinic of the Montreal Dental Club, September 22-25. The

President, Dr. A. D. Angus, opened the session with a very inspiring address which appears in this issue of the Journal.

Dr. F. D. Miller of Altoona, Pa., showed a moving picture film describing the technique in the "Use of Huelon in the Building of Acrylic Inlays, Bridges and Jacket Crowns". He showed a film, also, illustrating the various steps in the "Construction of Immediate Duplicate Dentures". Later he gave a lecture on "Various Phases of General Practice," illustrated with coloured lantern slides. Dr. N. G. Wills of Connersville, Ind., discussed the subject "Practical Engineering as Applied to Removable Partial Denture Designing". Dr. H. A. Baxter of Montreal presented a variety of cases on "Surgical Reconstruction of Cleft Lip and Palate," by means of slides and coloured movie films. Dr. Douglas B. Parker of New York gave a clinic on "Traumatic Injuries of Face and Jaws." Dr. H. S. Hayden of Montreal discussed the subject of "Clinical Photography". Dr. G. Lord of Montreal discussed the "Establishing of Positive Centric with Use of Pin Tracer on Stabilized Base Plates for Full Dentures" demonstrating the resultant reduction of chair time when this technique is employed. Dr. D. S. Gardner of Scranton, Pa., showed a practical method of making "Porcelain Jacket Crowns using Rubber Dam in Preparation," illustrated by coloured slides and coloured motion pictures. Dr. D. W. Gullett of Toronto spoke on "Post-War Dentistry".

Table clinics were presented by the following: Dr. O. S. Clappison of Toronto on "Gold Castings"; Dr. G. V. Fisk of Toronto on "Wiring Technique and Acrylic Splints in Jaw Fractures"; Dr. W. K. Prendergast of Toronto on "Silver Nitrate Technique"; Dr. S. A. Forman of Cleveland, Ohio, on "Self Administered Analgesia Using Ethyl Chloride"; Dr. H. S. Hayden of Montreal on "Clinical Photography"; Dr. R. Baribeau of Levis, Quebec, on "Pulp Testing and Ionization"; Dr. G. Lord of Montreal on "Establishing Positive Centric"; Dr. C. R. Seller of Montreal on "Hydrocolloid Technique for Inlays and Fixed Bridges".

Once more Dr. M. L. Donigan has done a masterly piece of work in arranging for this splendid program.



J. S. BRICKER

BRITISH COLUMBIA:

Dr. Bricker, Past B.C. Editor for the Journal of the C.D.A.

Many regrets have been expressed at the fact that Dr. Bricker found it necessary to resign from the B.C. editorship of the Journal of the Canadian Dental Association after serving in this capacity most faithfully since the inception of this publication nearly eight years ago.

Joseph Sterling Bricker was born in Lis-towel, Ontario, and was graduated from the Royal College of Dental Surgeons of Ontario in 1914. As a dental student he was Associate Editor of *Hya Yaka*. For four years he was on the Dents hockey team (twice interfaculty champions) also a member of the soccer team and captain of the track team. He was individual champion every year for interfaculty and collegiate. His pole vault record stood for several years.

Dr. Bricker practised his profession in Coronation and Lethbridge, Alberta, moving to Vancouver, in 1919. He has always been associated with dental activities. He is a past secretary and president of the Vancouver Den-

tal Society and the British Columbia Dental Association. During his term as President of the latter Association a joint meeting of the Alberta, British Columbia, Washington and Oregon Associations was held in Spokane, Washington.

He was chairman of the Publicity Committee of the Pacific Coast Dental Conference when this meeting was held in Vancouver and was responsible for the Bulletin.

He was chairman of the Gold Foil Study Club under Ernie Jones, also chairman of Porcelain, Crown and Bridge and Inlay clubs, having published several papers on Fixed Bridge Work.

He has been a golfer for many years, with a handicap of 6.

Dr. Bricker's present hobby is pictorial photography, several prints having been accepted at International Salons and one of his masterpieces was published in the Journal of the Canadian Dental Association.

This faithful and efficient worker will be greatly missed in connection with the work of our national journal but he has assured us that he will continue to assist in any way possible.

NEW BRUNSWICK:

Annual Convention

The 47th Annual Convention of the New Brunswick Dental Society was held September 21-22 in the Admiral Beatty Hotel, Saint John. Dr. H. G. Vaughan, President of the Society addressed the meeting and outlined the year's activities.

The following speakers took part, Dr. J. H. Johnston of the Faculty of Dentistry, University of Toronto; Major M. A. Clay of Military District No. 7; Dr. E. W. Lunney, chief anaesthetist of the Saint John General Hospital, and Irving S. Miller of the L. D. Caulk Company of Canada who spoke and gave a clinic on acrylics.

The following officers were elected: Honorary President, Captain Frank Boyanes, formerly of Saint John and now of the C.D.C. in England; President, Dr. F. C. Simms of Edmundston; Vice-President, Dr. J. Bernard Gosnell, Saint John; Sec.-Treasurer, Dr. A. J. Coughlan, Saint John; Members of the Council are Drs. A. J. Cormier, Moncton; V. Hudson, Moncton; J. B. O'Brien, Saint John; R. R.

Ross, Fredericton; F. L. Nutler, Fredericton; G. G. MacDougall, Sussex; Theo. Gouden, Campbellton; G. Vaughan, Chatham, and Howard MacDonald, Saint John. Dr. Mac-

Donald also represents the Society in the Canadian Dental Association and Dr. F. C. Bonnell of Saint John is representative for the Dominion Dental Council.

EMPIRE NEWS

GREAT BRITAIN:

Restriction of Supply of Vulcanizing Rubber

In Britain, from October 3, supplies of rubber, for the manufacture of vulcanizing rubber for dental purposes was restricted to an amount necessary to enable essential repairs to existing dentures to be carried out.

AUSTRALIA:

Rationing

Following the introduction of the Government's clothes rationing system, tentative arrangements have been made with the Rationing Commission for the Association to issue certificates of identification to enable the purchase of surgical coats and gowns on a reduced coupon scale by members desiring this facility. —D. Jour. of Australia.

NEW ZEALAND:

State Medicine in New Zealand

New Zealand's Government is still trying to establish left wing State medicine, despite the public's lack of interest in so-called free service and the medical profession's determined resistance. Although there are about 700

doctors in New Zealand, less than fifty surrendered to the Government. So far the Government's efforts have failed. —U.S.A. Medical Times, October, 1942.

EIRE:

Dentistry in Eire

by E. SHERIDAN, F.R.C.S., L.D.S.

The number of students qualifying through the various Universities and Colleges is not sufficient to fill the vacancies caused by death and retirement and in addition provide dental surgeons for new appointments.

Considering that in the City of Dublin alone over 70,000 children attend national schools, and at least twenty-five full-time dental officers would be needed to cope adequately with the dental work needed, one can form an idea as to the number of graduates required yearly if and when school dental service is established throughout the country.

A conservative estimate of the incidence of dental disease in this country would be 90 per cent., and much suffering and ill health would be averted if early treatment were available. Unfortunately the value of such early treatment is not recognized to any extent.—*Excerpt from Hospital Year Book per Dental Record.*

GENERAL NEWS

Dominion Dental Council Examinations

The D.D.C. examination will be held in Edmonton, Alberta, *only* from January 4 to 9, 1943, following the graduation of the senior class. Any candidates who have any intentions of taking their class D examinations should communicate at once with the Secretary, Dr. A. J. Brett, Regina, Saskatchewan.

Health Policy

NATIONAL INSURANCE PLAN NEEDED

by Oakley Dalgleish
Staff Writer, The Globe and Mail

All unnoticed, much expert labour has been going into the planning of a health insurance policy for Canada. That work has yielded results. Last week those results were the

basis of a revival of provincial interest in the scheme.

They have not, some officials feel, reached the stage where they can be said to guarantee the shape of things to come. Best hope for a further speeding up is the growing conviction among government and medical authorities that Canada should not enter a postwar era of rehabilitation without an insurance plan.

The plan can be ready. There is still no assurance that, if and when accepted, it will be a national plan. Today, opinion of the interested groups which have been contributing most to the discussions and the planning is still divided between one scheme and another.

This difference of opinion is about the 'biggest obstacle the planners have to down. On the record they are entitled to a bit of pessimism. Health insurance has been before governments since March, 1928, when a select standing committee on industrial and international relations was asked to investigate and report on it. In 1929, at the committee's suggestion, the Department of Pensions and National Health was asked to survey the field and learn if the provinces and the medical profession would co-operate.

It was May, 1932, before the Dominion Council of Health revived interest by urging that the committee's recommendation be implemented. It was, and since then health insurance has been continuously in and out of the House of Commons and the Legislatures. Always the constitutional difficulty provided the snag.

OTTAWA TAKES LEAD

At present all activity in development of the plans is in Federal hands. Most of the impetus of recent months has been supplied by the special advisory committee on health insurance—a group of research, statistical and financial experts from other departments—appointed by Order-in-Council last February.

During the last year seventeen committees representing such groups as the Canadian Medical Association, the Canadian Nurses' Association, the Canadian Hospital Council, the Canadian Dental Association, the Canadian Public Health Association, Canadian Manufacturers' Association, Catholic Hospital Association, Canadian Life Insurance Officers'

Association, Federation of Agriculture, Trades and Labour Congress, the Welfare Council and Social Workers' Association, have discussed insurance with department officials, some as many as six or seven times.

In general outline discussion has been around a four-way plan, to which Federal and Provincial Governments, employer and employee would contribute. Their contributions would cover the care of the indigents included by the scheme. The experts have been working on a cost figure of \$23 per person, the estimated per capita cost of illness in Canada on the basis of the 1931 census.

Cost authorities feel that \$23 allows a comfortable working margin, as health insurance will not provide such items as private hospital rooms and special nurses, which that figure includes. There will be hospitalization and clinical attention, but free from frills. Each participating party would have a twice yearly dental check up with routine attention to cavities, extractions and cleaning as part of the service. Opinion differs strongly as to the method of providing medical service and as to the financial classification of the eligibles. The British panel system has been discarded. But something akin to it has been suggested, whereby a doctor would be assigned to a specific locality. He would supervise the health of around 1,000 persons in that locality for a fixed fee per head.

DOCTOR'S RESPONSIBILITY

He would be entirely responsible for the health of each family, including such attention as prenatal care and preventive medicine—diphtheria, whooping cough, scarlet fever, vaccinations. Through him all facilities like tuberculosis sanatoria, mental institutions, contagious disease clinics would be available to the insured.

According to one source, the medical men feel the plan should be confined to those with an \$1,800 income or less. Other groups, including organized labour, favour a \$2,400-a-year maximum. Because so much of a farmer's income is taken from the land, it is argued that farmers should be in a separate and lower income bracket. Yet, cost of administering the scheme in rural areas would be proportionately higher.

Another item of debate is how much of the cost of research medicine should be charged

against health insurance. It has been suggested that a special department for the encouragement and expansion of research be set up under the Department of Pensions and National Health, its cost to be met out of general taxation. The theory is that, as the benefits of research accrue to all medicine, every one should pay. Similarly, physical fitness is held to be in the category of preventive medicine. While it is admitted that costs of insurance can be reduced by the degree to which a national physical fitness program succeeds, it is held that contributors to the plan should not pay for more than they receive. The suggestion is that the insurance fund be assessed on the basis of benefits the insured persons actually enjoy.

A further and direct cost against the scheme, still in the discussion stage, is that of superannuation allowances for doctors and nurses. Added to this is a proposal that all insurance doctors periodically be assisted in taking post-graduate and clinical studies.

Only as such details are overcome or minimized is it possible to secure provincial approval for a uniform plan. But, one official pointed out, if uniformity is possible, there can be no valid argument against one national health insurance plan.—*Toronto Globe and Mail*, Oct. 1, 1942. Forwarded by C.D.A. Committee on Federal Health Insurance.

The Inclusion of Dental Services in Health Plans*

THE history of the formulation of health plans indicates that dentistry has practically always been seriously considered in the initial study but has been often dropped in the final drafting of the legislation. The reasons for this are principally as follows:

(1) Dentistry is at first considered as an adjunct and consequently given small financial provision. When the real cost is realized by the proponents of the plan, it is dropped.

(2) An unsuccessful attempt is made to integrate dentistry into medicine which fails.

This point is of great significance to the dental profession because in the event

that dentistry is dropped in the initial arrangement, it is often included later under rather indefinite terminology to satisfy the demand for it as an essential part of health services.

Dentistry, today, is recognized as a definite part of any health scheme and it seems difficult to see how any government could pass legislation to institute a health insurance measure without its inclusion. In support of this contention the following extracts from published statements are quoted. You will observe that the statements do not say "medical services" only but "medical and DENTAL services." It is believed that DENTISTRY was not so recognized a few years ago, and this fact is of some import.

James B. Carey, Secretary of the Congress of Industrial Organizations, in the August issue of the *Atlantic Monthly*, speaks for Labour's platform:

"Fourth, and equally important, is the expansion of the supply of foodstuffs, clothing, housing, recreational, educational, medical and DENTAL facilities." And later in the same article: "enable their families to have better medical and DENTAL care if such things were adequately provided."

Dr. McGhie, Deputy Minister of Health of Ontario, in a newspaper summary of the present condition of health in Ontario, referred to DENTISTRY each time medicine was spoken of in the article. "The man on the street, the farm worker, and the men in the mines and factories are eating better food and calling the doctor or the DENTIST before an emergency arises." And later in the same article: "Before the war, it was pointed out, Ontario public health suffered through postponement of medical and DENTAL operations."

Income tax deductions allow this year, in Canada, for DENTAL as well as medical services on equal terms, under certain conditions.

An unofficial platform drawn up by the meeting of the Dominion-wide representatives of the Conservative Party at Port Hope recently included a plank for the introduction of health insurance for medical and DENTAL services.

Many such references could be produced of like nature from current public statements on health. We believe that DENTISTRY did not occupy this prominent position in the thought of public officials a few years ago. The fact is significant at this critical time when gov-

ernment officials are proposing new legislation affecting the DENTAL profession.

It would appear that in face of this essential health service of the DENTIST and the recognition of his position in health matters by the public, that no government can afford to ignore DENTISTRY in the drafting of such legislation.

DON W. GULLETT

Chairman.

*Released by C.D.A. Committee on Federal Health Insurance.

IN MEMORIAM

William Orville Godwin of Port Colborne, Ontario, aged 61, died September 23.

He taught electricity in the Bliss Electrical School of Washington, D.C., for eight years and then decided to enter the dental profession.

He was graduated from the Indiana Dental College at Indianapolis and also from the R.C.D.S. of Ontario. He moved to Port Colborne in 1919 and has practised there since that time.

He was a member of the United Church and a former member of the A.F. and A.M. and of the Port Colborne Lions Club.

Dr. Godwin is survived by his widow and four daughters, three grandchildren, three brothers and four sisters.

•

Allan E. Shaver of Brockville, Ontario, aged 66, died September 17. He was graduated from the R.C.D.S. of Ontario in 1902 and attended several sessions at Northwestern University Dental Faculty before going to Toronto.

He began practice in Cardinal, Ontario, and after a short time moved to Brockville where he has practised since then.

For the past 14 years he had been a member of the Board of Directors of the

Children's Aid Society and for a number of years served on the Board of Education and the Library Board. He was a past master of Sussex Lodge No. 5, A.F. and A.M., a past principal of Sussex and St. Lawrence Chapter, R.A.M., a companion of Gondemar Preceptory, Knights Templar and a member of the Mystic Shrine. He was also one of the oldest members of Rotary in Brockville. He was an elder of the Wall Street United Church and chairman of a committee of its board of trustees.

Dr. Shaver is survived by his widow and one daughter, two sons and a brother.

•

William Collins Wickett of Cochrane, Ontario, aged 62, died at the Toronto Western Hospital, October 17, following a prolonged illness.

He was graduated from the R.C.D.S. of Ontario in 1905. He first established a practice in North Bay moving to Toronto in 1914. For the past five years he has practised in Cochrane. He was a member of the Masonic Order and York Minister Baptist Church.

Dr. Wickett is survived by a sister and a brother.

... SECTION FRANÇAISE ...

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Nos Difficultés

Les guerres, fruits de la perversion périodique de l'intelligence humaine, sont toujours accompagnées d'une terrible décadence des valeurs spirituelles, même, et peut-être surtout, pour les vainqueurs. Il n'y a pas d'erreur à croire que cette fois ce sera comme toujours. Déjà les signes d'un vertigineux avilissement grandissent dans toutes nos collectivités. La confusion la plus étrange, qui a depuis longtemps fait son apparition, règne maintenant en maîtresse là où sans le moindre doute on s'était cru les maîtres absolus de l'avenir. On dirait à voir le monde qu'une forte proportion de ses habitants travaillent à leur propre perte. Les anciens avaient donc raison de dire: Quos Jupiter vult perdere primo dementat.

Faudrait-il que nous soyons de ceux dont la perte est écrite dans les décrets de la Providence? A plus d'un indice, je crois que non. Notre profession dans son domaine ne pourrait-elle pas faire sa part? Assurément, oui mais, il nous faudra dans ce but nous remettre bien en tête que chacun doit faire quelque chose pour le bien commun s'il ne veut pas périr lui-même. Si nous sommes déjà convaincus de cette nécessité pourquoi ne pas l'appliquer tout de suite à notre Journal, notre seul organe scientifique. Est-il juste qu'un seul soit forcé de le maintenir dans l'intérêt de tous? Non. Il semble qu'en certains milieux on l'ait déjà compris. Notre Bureau des Gouverneurs a décidé de faire sa part, mais n'attendons pas de lui qu'il se charge de nous instruire tous par des communiqués scientifiques, ce n'est pas son rôle. Il faut la collaboration de tous ceux qui pratiquent leur profession avec conscience, ont découvert des problèmes, en ont trouvé la solution, de tous ceux qui en un mot peuvent être utiles à leurs confrères par leur expérience personnelle. D'autres se croient

incapables de traiter un sujet technique ou scientifique, mais auraient d'excellentes suggestions à faire. Que ne les mettent-ils pas par écrit pour les envoyer tout de suite au rédacteur de la revue. Il se ferait un plaisir de les étudier avec d'autres confrères. D'autres encore ont de la facilité pour la traduction, le comité de rédaction serait heureux de leur fournir les articles à traduire ou d'en accepter de leur choix.

Que chacun y mette du sien et notre Journal vivra. . . Si non?

Dr A. Thibaudeau.

L'Impôt du dentiste

par M. ANDRE G. LEROUX, C.A.—C.P.A.

Le 1er août 1942, le Parlement Fédéral ratifiait les amendements suggérés par l'Honorable Ministre des Finances—Monsieur Ilsley—relativement à la loi de l'Impôt de Guerre sur les revenus. Le public avait appris auparavant, en date du 23 juin dernier, les changements que le gouvernement avait l'intention d'apporter à la loi de l'Impôt sur le revenu. Cette nouvelle fut reçue froidement par tous les contribuables lesquels s'empressaient alors de tenter à chiffrer approximativement l'augmentation d'impôt qu'ils seraient appelés à acquitter.

J'essaierai donc ce soir de m'entretenir avec vous, messieurs, sur l'effet que peut produire sur vos déclarations les nouveaux amendements apportés à la loi de l'impôt et la répercussion de cet impôt sur le budget personnel de chacun de vous. Le département de l'Impôt considère tout dentiste comme professionnel et à ce titre celui-ci est assujéti aux règlements qui peuvent être édictés par le département. Le professionnel qui songe à préparer sa déclaration d'impôt se butte infailliblement à l'absence de comptabilité des affaires de son bureau; il y a certes des exceptions, mais la majorité déplore le fait de ne pas être comptable. Une certaine catégorie d'entre eux requiert les services d'experts comptables; une autre tente de bon gré à établir l'impôt exigible au meilleur de leur connaissance tandis qu'une dernière catégorie, en certains cas, néglige de produire leur déclaration. Une fois la déclaration produite et l'impôt versé au fisc, certains d'entre eux croient que tout est bien terminé et qu'ils se sont acquittés de leur devoir envers l'état, lorsqu'un matin, ils reçoivent la visite d'un répartiteur du département fédéral. Celui-ci peut avoir plusieurs motifs pour sa visite laquelle parfois se fait une, deux ou même trois années après la production de votre rapport au département. Si votre déclaration a été établie d'après des chiffres que vous pouvez expliquer avec preuves à l'appui, la visite sera de courte durée mais une vraie nuisance dans un cas contraire.

Il s'ensuit, par conséquent, que vous êtes appelés à connaître d'une façon idéale les éléments qui conduisent à l'établissement de votre revenu imposable car une fois ce but atteint vous pouvez facilement chiffrer l'impôt dont vous êtes redevable à l'Etat. Je dis "facilement" car les formules de déclaration d'impôt, section du calcul de l'Impôt, sont clairement définies et expliquées.

Les éléments de l'assiette de l'impôt sur le revenu sont:

1. *Votre revenu* lequel est obtenu en déduisant vos dépenses du total de vos revenus bruts.
2. *Votre revenu imposable* qui représente votre revenu diminué de vos dons aux oeuvres de Charité, des frais médicaux exceptionnels et des paiements reconnus par le département de l'Impôt pour fins de pension ou retraite.

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3. *Les Epargnes* personnelles qui peuvent être déduites de l'Impôt global. Ce dernier élément est une caractéristique nouvelle ajoutée au mécanisme du calcul de l'Impôt exigible.

Vos revenus bruts comprennent vos honoraires professionnels, d'administrateurs et tout traitement ou salaire. Ils incluent aussi vos revenus de placements représentés par les intérêts, dividendes, loyers, rentes viagères, revenu successoral et autres redevances.

Vos revenus sont divisés au point de vue de l'impôt en deux catégories:

- (a) *Revenu gagné*: c'est-à-dire le revenu de votre profession.
- (b) *Revenu de Placements*: c'est-à-dire le revenu de vos placements et tout autre revenu.

Il ne faut pas considérer comme revenu, dans votre cas, les revenus suivants:

- (a) Bénéfices de capital—vente d'immeuble mobilier, automobile, actions ou obligations.
- (b) Recettes fortuites telles que indemnités de maladie ou accident, dommages causés à vos biens.
- (c) Dividendes sur polices d'assurance à vie produit d'une police d'assurance, paiements d'invalidité reçus soit pour accident ou maladie, valeur de rachat sur police.
- (d) Rente viagère jusqu'à concurrence de \$1,200.00.
- (e) Legs de principal.

Vos dépenses comprennent deux catégories:

- (a) Les dépenses faites dans le but de réaliser votre revenu gagné.
- (b) Les dépenses faites dans la perception de vos revenus de placements—5% des revenus de placements—

Les dépenses allouables contre votre revenu gagné comprennent généralement ce qui suit:

- (a) Loyer du bureau.
- (b) Salaire de la garde malade et du préposé à la comptabilité.
- (c) Eclairage et pouvoir.
- (d) Téléphone et Télégramme.
- (e) Fournitures du bureau.
- (f) Papeterie et Impression.
- (g) Publicité.
- (h) Assurance feu et vol.
- (i) Cotisations versés aux associations dentaires.
- (j) Taxe d'eau et d'affaire.
- (k) Achats de matériel pour fins dentaires tels que coton absorbent, alcool, produits anesthésiques, fraises, ciment, porcelaine, plâtre, substances plastiques, brosse à prophylaxie.
- (l) Buanderie.
- (m) Honoraires des mécaniciens dentistes et achats de matériel de ceux-ci.
- (n) Livres et périodiques—jusqu'à concurrence de \$100. par année.
- (o) Amortissement sur agencement de bureau et outillage.
- (p) Petites réparations de l'agencement de bureau et l'outillage.
- (q) Frais de déplacement.

Vos dépenses allouables contre votre revenu de placement comprennent généralement ce qui suit:

- (a) Frais de perception sur dividendes, intérêts, loyers ou autres redevances.
- (b) Intérêts sur sommes empruntées pour acheter des placements—ne pas inclure commissions payées aux coursiers—
- (c) Epuisement graduel sur revenu minier ou prétoiler.

- (d) *Si vous possédez des immeubles loués*—Taxes, intérêts hypothécaires, dépenses d'entretien telles que peinture, plâtrage, tapissage; amortissement sur le coûtant de la construction seulement.

Ayant ces renseignements en mains, vous pouvez établir votre revenu annuel lequel servira de base à l'assiette de l'impôt.

J'attire l'attention sur le fait que certains d'entre vous doivent penser souvent à la question suivante: "Ces renseignements sont exacts en théorie, comment puis-je faire pour les obtenir en pratique, moi qui ne suis pas né comptable?" La solution suivante que je vous offre remédiera peut-être à votre question qui se résume à celle-ci: "De quelle manière puis-je contrôler mes revenus et dépenses afin de faire une bonne déclaration?"

(a) *Pour ceux qui ne possèdent pas de comptabilité*: A chaque matin, avant vos heures de bureau, ou le soir, après vos heures de bureau, le moment le plus convenant, prenez quelques minutes à établir vos recettes du jour et les déboursés faits.

Contrôle des Recettes.

Honoraires: Chaque recette encaissée devra être enregistrée sur la fiche de votre client et enregistrée dans votre livre d'honoraires perçus. Ne pas enregistrer dans votre livre d'honoraires, les honoraires inscrits sur la fiche de votre client et non perçus. Le total des honoraires de votre livre à la fin de l'année vous fournit votre renseignement pour fins d'impôt.

Placements: Inscrire dans un livre spécial tous vos revenus de placements incluant les détails relatifs aux déductions faites à la source pour fins d'impôt.

Contrôle des Déboursés.

Mettre sous filière tous les comptes acquittés et enregistrer leur montant dans un livre à cet effet. Le montant total à la fin de l'année vous fournit vos dépenses totales déboursées pour votre déclaration.

En ce qui a trait à vos dépenses de placement, inscrire celles-ci dans un livre séparé afin d'être en position en fin d'année d'établir la séparation par classes des dépenses.

Les comptes impayés seront classés sous filière séparée.

(b) *Pour ceux qui possèdent une comptabilité adéquate*: Enregistrer toute transaction au complet.

Une autre question se pose souvent de la manière suivante: "Dois-je déclarer mes honoraires chargés mais impayés à la fin de mon année fiscale?" A cette question, je réponds pour ceux qui n'ont pas de comptabilité, de ne pas déclarer ces revenus. Déclarer seulement vos encaissements d'honoraires mais d'autre part ne réclamer que vos dépenses acquittées.

A la fin de l'année, vous pouvez vérifier le montant de votre revenu brut en le comparant avec le total de vos dépôts bancaires tout en prenant en ligne de compte les recettes de capital. L'écart vous donnera les retraits d'argent que vous avez pris pour fins de subsistance lesquels vous jugerez s'ils sont exacts et sont dans la marge de la réalité.

Une fois que vous avez obtenu votre revenu, vous devez déduire de celui-ci vos dons aux oeuvres de charité (10% de votre revenu), vos frais médicaux exceptionnels (L'excédent de 5% de votre revenu global) et vos paiements reconnus pour fins de pension. Le résultat vous donne votre revenu imposable.

Avant de procéder à vous expliquer comment l'impôt à payer est établi, j'aimerais à vous donner les renseignements sur les amendements nouveaux et qui vous affectent.

1. *Production de la Déclaration*: Antérieurement, tout contribuable faisait sa déclaration le 30 avril de chaque année et il avait, avant cette date, le privilège de faire des paiements par anticipation. Vous devez maintenant acquitter votre impôt de 1942 par versements trimestriels le 15 octobre 1942 et le ou avant le 15 janvier, 15 avril et 15 juillet 1943. Une formule spéciale de remise, la

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formule T.7.B. sert à cette fin. Vous devez faire un rapport final le 30 avril 1943 sur la formule T.1.

2. Dégrevements:

<i>Antérieurement</i>	<i>Maintenant</i>
*Homme marié 1,500.00) déduits	\$150.00 déduit de l'Impôt Prog.
Célibataire 750.00) du	aucune déduction de l'Impôt.
Enfants 400.00) revenu	(\$80.00 déduit de l'Impôt Prog.
Personnes à charge 400.00) imposable	(\$28.00 déduit de l'Impôt normal.
Célibataire \$660.00 du revenu imposable.	
Homme marié (\$1,200.00 avant être imposable et	
(660.00 de déduction du revenu	
(imposable.	

*Si l'épouse reçoit un revenu non gagné de plus de \$660.00 vous devez produire votre déclaration comme si vous étiez célibataire.

Il est important de noter que toute personne célibataire, veuf et ayant un enfant ou parent à charge dans un établissement domestique est considéré pour fins d'impôt comme homme marié et bénéficie des privilèges des exemptions accordées aux hommes mariés. Noter que pour fins d'impôt normal et progressif, les enfants doivent être âgés de moins de 18 ans pendant l'année 1942 ou ayant dépassé cet âge sont infirmes mentalement ou physiquement, ou s'ils fréquentent une maison d'enseignement.

Si vous entretenez un parent à votre charge vous avez droit à 20% de vos déboursés avec maximum de \$28.00 de déduction de votre impôt normal et \$80.00 de votre impôt progressif. Une personne à charge ne doit pas jouir d'un revenu personnel de plus de \$400.00 par année.

3. *Épargne remboursable*: Vous êtes appelés maintenant à prêter au gouvernement les épargnes que vous êtes censés effectuer annuellement. Cependant, si vous épargnez, le fisc vous permet de déduire ces épargnes volontaires du montant d'épargne obligatoire. Les épargnes admises sont:
 - (a) Primes d'assurance-vie—peu importe le genre s'il est en cours avant le 23 juin 1942 et soit-elle sur votre vie, sur celle de votre épouse ou d'une de vos personnes à charge.
 - (b) Primes d'assurance-vie qui datent du 23 juin 1942 jusqu'à concurrence de \$100.00 pour la première année et pourvu qu'elles
 1. exigent 30 paiements de primes
 2. soient un genre de vie entière
 3. soient un genre de système temporaire d'au moins cinq ans.
 - (c) Remboursement de capital sur hypothèque effectué avant le 23 juin 1942 et portant sur une propriété résidentielle occupée ou non par vous.
 - (d) Paiement sur contrats de rentes viagères ou d'épargne pourvu que ces contrats existaient avant le 23 juin 1942, que vous ne pouvez pas ajourner sans réaliser de perte.
 - (e) Nulle personne âgée de 65 ans et dont le revenu de 1942 s'établit à moins de \$5,000.00 n'est tenu d'acquitter la portion d'épargne de 1942.

Etablissement de l'Impôt.

L'impôt à payer pour l'année 1942 comprend trois facteurs:

1. l'impôt global sur le revenu proprement dit.
2. l'épargne obligatoire, laquelle sera remboursée avec intérêts après la guerre. Cette épargne est chiffrée d'après l'impôt global.
3. Surtaxe de placements.

L'Impôt global comprend:

1. l'Impôt normal moins les dégrèvements pour les personnes à charge seulement.
2. l'Impôt progressif moins les dégrèvements statutaires et de personnes à charges.

Les taux de l'Impôt normal sont:

Célibataire:

7% pour tout revenu imposable dépassant \$660. mais n'excédant pas \$1,800.

8% pour tout revenu imposable dépassant \$1,800. mais n'excédant pas \$3,000.

9% pour tout revenu excédant \$3,000.

Personne Mariée.

7% pour tout revenu imposable dépassant \$1,200.

L'épargne obligatoire est calculée d'après l'impôt global et dépend des facteurs suivants:

1. Si l'épargne volontaire excède l'épargne obligatoire, le contribuable ne paiera que la moitié de son impôt global.

2. Si l'épargne volontaire n'excède pas l'épargne obligatoire, le contribuable a le droit de déduire de l'impôt obligatoire son impôt volontaire mais il est restreint à ses déductions aux limites suivantes entre le moindre des deux montants qui suivent:

Célibataire: $\frac{1}{2}$ de son impôt global ou 8% plus 1% (personne à charge) de son revenu imposable (épargnes maxima \$800.) (maximum de \$100. pour chacune d'elles).

Personnes mariées: $\frac{1}{2}$ de son impôt global ou 10% plus 1% (personne à charge) (épargnes maxima \$1,000.00) Maximum de \$100.00 pour chacune d'elles.

EXEMPLE

Statut	Personnes à charge	Revenu Imposable	Epargne Volontaire	Impôt Global	Epargne Obligatoire	Impôt à Payer
Marié	2	2,740.00	450.00	543.60	rien	271.80
Célibataire	2	2,380.00	300.00	490.00	rien	245.00
Célibataire	—	1,769.50	115.00	479.37	26.56	364.37
Marié	2	2,740.00	100.00	543.60	171.80	443.60
Marié	1	2,380.00	100.00	490.00	145.00	390.00

La surtaxe sur tout revenu de placement dépassant \$1,500 est de 4%.

Je termine en vous donnant quelques conseils. Le département de l'Impôt possède un personnel d'experts comptables préposés à la vérification de vos déclarations. Vous devez accueillir cet investigateur comme un ami et celui-ci s'efforcera de vous conseiller et de résoudre les problèmes que vous lui aurez soumis.

Plus que jamais vous devez considérer la question de l'Impôt comme une question des plus sérieuses sans quoi vous risquez, au moment le plus inattendu, de faire face à un problème très déplaisant. Cette année tout contribuable gagnant plus de \$660.00 et \$1,200.00 selon qu'il est célibataire ou marié doit produire sa déclaration. Considérez le cas d'un de vos confrères qui n'a jamais produit de déclarations. Certains me diront qu'il est impossible pour l'investigateur d'atteindre celui-ci parce qu'il ne tient aucune comptabilité, encaisse ses recettes, paie comptant ses comptes de fournisseurs et de ce fait, mène une belle vie. Prenez garde, messieurs, prenez garde! Saviez-vous que le cas ci-haut est un des plus intéressants pour l'investigateur? La raison est simple car c'est le cas d'une répartition arbitraire, plus douloureuse qu'une abstraction, sans anesthésiques, d'une molaire.

Société Dentaire de Montréal, séance d'octobre.

Un Effort Nécessaire

UNE CAMPAGNE EN FAVEUR DE L'HYGIENE DENTAIRE ET DE LA PROFESSION DENTAIRE DANS NOTRE PROVINCE

Sous le haut patronage et avec l'aide de l'honorable Ministre provincial de la Santé—à qui il exprime sa plus vive gratitude—le Collège des Chirugiens-dentistes de la province de Québec réalise un désir déjà bien ancien et enterprend immédiatement dans tout le Québec une campagne en faveur de l'hygiène dentaire,—donc au profit, tout autant de la population tout entière en général, que des chirurgiens-dentistes eux-mêmes, en particulier.

Cette campagne s'ouvrira à Montréal en novembre et se continuera sans interruption durant au moins trois mois, si ce n'est davantage.

Elle utilisera la radio et les journaux—quotidiens des principales villes et hebdomadaires de tous les centres de la province—aura le précieux concours des autorités provinciales, religieuses, militaires et civiles, des municipalités, des commissions scolaires, de la Croix-Rouge, des grandes associations et sociétés, des Chambres de Commerce,—demandera l'appui de la profession médicale et comptera beaucoup pour atteindre le but qu'elle s'est assigné sur la collaboration constante de tous les chirurgiens-dentistes de la province.

Pour mener à bien l'oeuvre immense ainsi entreprise et assumer la lourde tâche qu'elle comporte, un "COMITE D'HYGIENE DENTAIRE" a été formé à côté du Bureau des Gouverneurs du Collège,—Comité dont la présidence a été confiée à monsieur le docteur Jean Brault, le Président du Collège en faisant lui-même partie ex officio.

Les manifestations diverses de la campagne, qui débiteront à Montréal,—dont quelques-unes, à la radio et dans les journaux, atteindront tout de suite la province tout entière—se répéteront dans toutes les principales villes du Québec ainsi que dans la plupart de ses paroisses rurales.

Le Comité directeur de la Campagne se permet de compter beaucoup, pour en faire un succès, sur la coopération de tous les membres de la profession dentaire, avec lesquels il communiquera directement aussi souvent qu'il le jugera nécessaire. Dès maintenant il leur demande de bien vouloir faire autour d'eux toute la publicité verbale possible à cette Campagne d'intérêt général, et, dès qu'ils en connaîtront le détail, d'en faire part dans leur entourage le plus largement qu'ils le pourront. Chaque dentiste de la province de Québec aura un rôle éminemment nécessaire et utile à jouer dans ce mouvement qui ne peut laisser aucun d'eux indifférent. Il y va de leur meilleur et plus urgent intérêt au même titre que de celui, non moins pressant, de la santé publique.

Le Collège des Chirugiens-dentistes de la province de Québec adresse donc le plus vif appel à tous ses membres à ce sujet et, ne doutant pas qu'ils y voudront répondre favorablement, leur en exprime à l'avance toute sa reconnaissance.

Dr Jean Brault
Président du Comité d'Hygiène
dentaire de la province de
Québec.

Dr Armand Fortier
Président du Collège des
Chirugiens-dentistes de
la province de Québec.

Le Diabète

et

le système dentaire

(suite)

J'en arrive à la deuxième partie de ce petit exposé clinique: l'influence des dents, du système dentaire sur le diabète.

Ici, on se sent plus enclin à rêver un petit peu, si je puis dire, et je ne voudrais pas me laisser aller à m'avancer trop sur ce terrain, car il est plus fragile, et pour vérifier des théories il faut énormément de temps, de patience et aussi beaucoup d'intelligence.

Je serai donc très discret; je dirai qu'évidemment l'affection dentaire peut entraîner des conséquences au point de vue digestif et que dans ces conditions l'assimilation sera troublée. Je vous rappellerai qu'en somme le diabète n'est qu'un trouble de l'assimilation, qui porte plus particulièrement sur les hydrates de carbone, mais également sur les protéines et les graisses. Si l'acte initial de la digestion, la mastication, est troublé, toute l'assimilation pourra s'en ressentir. Et c'est ainsi que le système dentaire pourra être à l'origine non pas du diabète lui-même, mais de causes pouvant entraîner le diabète.

Cela a été souligné, soutenu par différents auteurs; le fait doit être retenu et je ne fais que vous le présenter.

Il faut également envisager le retentissement des complications dentaires sur le diabète, car si je vous disais tout à l'heure que le diabète a ce pouvoir redoutable de rendre très grave tout ce qu'il touche, inversement, tout ce qui survient chez un diabétique a le pouvoir de rendre le diabète beaucoup plus grave.

Prenons le cas d'un abcès dentaire comme nous en avons tous vu ou à peu près; cela évolue de façon assez bénigne, en général, tandis que chez un diabétique cela peut prendre des proportions énormes, au point que cela peut transformer un diabète simple en un diabète très grave et souvent mortel.

Je vous citerai tout à l'heure des faits de ce genre. La transformation s'opère très rapidement, à tel point que dans certains cas on méconnaît le fait et que l'évolution est immédiate, évolution très souvent mortelle.

Par conséquent, un simple abcès, qui à l'origine n'était pas grand'chose, a pu devenir, du fait du diabète, une affection absolument grave.

Dans les caries, la pyorrhée, on observe la même influence fâcheuse sur le diabète, non plus par la transformation subite d'un diabète bénin en un diabète grave, mais par une diminution de la tolérance, diminution à l'origine de laquelle différents facteurs jouent leur rôle (trouble de la mastication, infection, etc...).

Je reviendrai sur cette question de la tolérance et de la diminution de tolérance au point de vue pratique.

Mais il y a ici, auparavant, un point qui a son importance et que je veux soulever parce que c'est une question qui débordé la question du système dentaire et de ses relations avec le diabète: c'est l'anesthésie.

La question se pose ici à propos des extractions dentaires. L'anesthésie fragilise le diabétique et, si l'on n'y prend garde, risque de déclencher des complications les plus graves, en particulier le coma. Pour ma part, je n'ai presque pas eu à m'occuper de faits de ce genre, mais Joslin qui les a étudiés de près, déclare en un point de son livre qu'il n'a pas cru devoir classer les extractions dentaires comme des opérations

chirurgicales, et ceci est tout à l'honneur des dentistes, ajoute-t-il, et des précautions qu'ils ont pu prendre au cours des extractions dentaires.

Cela vous montre qu'il faut savoir prendre ces précautions et qu'avant de faire une anesthésie, il faut s'entourer de toutes les garanties sur lesquelles je vais maintenant insister.

J'en arrive à ma conclusion qui sera évidemment d'ordre thérapeutique et qui peut se formuler de la façon suivante:

Un diabétique doit être soigné quant à ses dents comme n'importe quel sujet; autrement dit, un diabétique qui a besoin de soins dentaires ne doit pas se les voir refuser comme je l'ai vu quelquefois, sous le prétexte qu'il est diabétique, et je vous répète que je l'ai vu assez souvent.

Il faut évidemment pour cela une collaboration entre le dentiste et le médecin appelé à soigner le diabète, et moyennant cette bonne entente, on arrive à traiter les diabétiques comme on traiterait n'importe quel sujet. Cela vaut d'ailleurs aussi bien pour les lésions dentaires que pour n'importe quelle opération.

Je citais tout à l'heure ce fait: Cela se passait dans une colonie, un monsieur a fait une appendicite banale et le chirurgien a refusé d'opérer le malade parce qu'il était diabétique. Résultat: le malade est mort dans les vingt-quatre heures. À l'heure actuelle, cela ne doit absolument plus arriver.

Sans dire que le fait de refuser les soins dentaires pourrait comporter d'aussi graves conséquences, je puis affirmer qu'un diabétique doit être soigné comme un sujet qui n'est pas atteint de diabète. Ceci comportera un double profit: pour les dents évidemment, et pour le diabète précisément en raison de ce que je disais tout à l'heure de l'influence du système dentaire sur le diabète.

Je me permets de vous rappeler brièvement ce qu'est le diabète, et à quelles variétés de diabète nous avons affaire en général.

Je vous ai dit tout à l'heure que le diabète est un trouble qui porte sur l'assimilation; on a l'habitude de dire sur l'assimilation des sucres, des hydrates de carbone; c'est exact en grande partie, mais le trouble ne se limite pas là, il porte également sur toutes les autres variétés alimentaires, sur les albumines et les graisses; cela est moins évident, mais est démontré par toutes les études de physiologie pathologique du diabète; c'est donc un trouble de l'assimilation totale.

Or, il est certain qu'il existe deux grandes variétés de diabète; on les a toujours distinguées, ces deux variétés, on leur a donné des noms successifs, suivant qu'on adoptait une théorie ou une autre. Autrefois on les appelait diabète gras ou arthritique, et diabète maigre. Considérez qu'on peut être gras sans être diabétique et être gros tout en ayant un diabète sévère. Par conséquent, le terme n'était pas très bon.

On les a appelés ensuite diabète bénin et diabète consomptif. Ensuite diabète avec dénutrition azotée et diabète sans dénutrition azotée. C'est la terminologie adoptée par mon maître, le Professeur Labbé.

Il y a une manière beaucoup plus simple de les classer, celle que nous adoptons entre nous: diabète avec acidose et sans acidose. C'est une réaction extrêmement simple de voir dans les urines s'il y a de l'acétone ou des corps acétoniques. On classe facilement ainsi le diabète. Le diabète acétonique correspond dans l'ensemble au diabète grave.

Eh bien, il faut se dire une chose, c'est que ces deux variétés de diabète se distinguent à l'origine

Je crois—c'est mon opinion personnelle et évidemment elle ne vaut pas grand'chose—qu'on entre dans le diabète immédiatement dans l'une des deux catégories: diabète bénin ou diabète grave. On ne voit pas un diabète bénin devenir définitivement grave sur la fin; par contre, on voit les sujets entrer immédiatement dans le diabète grave.

Or, les lésions dentaires se voient dans les diabètes bénins surtout, parce que les autres font des accidents beaucoup plus graves qui, souvent, entraînent la mort. Cela

indique bien que le diabète par lui-même ne fait pas grand'chose sur les dents. Les diabètes avec acidose font très peu de lésions dentaires.

Si je vous ai établi cette distinction c'est parce que je voulais vous dire que toute lésion dentaire était capable de transformer momentanément un diabète bénin en diabète grave; mais ce momentanément peut devenir, hélas, définitif, lorsque la mort s'ensuit, bien entendu.

On voit par exemple, chez un diabétique, une carie non traitée entraîner des lésions de nécrose osseuse qui prennent des proportions considérables; à leur tour, elles retentissent sur le diabète et le transforment en un diabète grave. Le malade fait de l'acidose, fait un coma acidotique et meurt parce que le coma acidotique pardonne très peu: le sujet meurt en deux, trois ou quatre heures au maximum.

Ces faits existent encore malheureusement; ils ne devraient plus exister, et je viens de montrer comment un diabète bénin peut devenir quelque chose de très grave sous la simple influence d'une lésion dentaire; il faut prévenir ces complications.

Pour traiter ces lésions dentaires, il faut mettre le diabétique à l'abri de la transformation de son diabète ou si ce diabète est déjà sérieux, il faudra empêcher son acidose de devenir grave et de le conduire au coma et à la mort immédiate. Cette préparation est fonction de la rapidité avec laquelle on doit intervenir.

Prenons un exemple: Il m'arrive un sujet atteint de nécrose maxillaire. Pour ma part, je me garderais bien de dire ce qu'il faut faire; je l'enverrais à un spécialiste qui traitera abcès et carie dentaire et lésion osseuse. Or, ce spécialiste me répond: Il n'y a aucun doute, il faut intervenir ce soir même. Il me le dit à deux heures de l'après-midi: vous voyez que je ne dispose que de quelques heures.

Par contre, si nous avons affaire à un sujet chez qui on doit pratiquer une intervention sanglante, sans urgence absolue, le dentiste me dira: Je vais le traiter, il faudrait bien qu'il soit en état de supporter cette intervention.—Quand allez-vous pratiquer cette intervention?—Dans trois ou quatre jours.—Dans ces conditions, je dispose de deux heures dans un cas et de trois ou quatre jours dans l'autre. La préparation n'est pas la même.

Or, nous ne disposons que de deux traitements: le régime et l'insuline. Tout ce qu'on a préconisé en dehors de cela, c'est du temps perdu.

Le régime: Vous avez affaire à un malade que vous voulez traiter en deux heures; il n'est pas question de régime. Il a mangé à midi, il ne mangera pas à sept heures; il n'est question ici que d'insuline; avec des taux suffisants, vous amenez votre malade à l'état normal. Le tout est d'y mettre le prix, c'est parfois extrêmement difficile, mais on y arrive.

En deux heures, il faut que je désucre un sujet; je ferai des injections intra-veineuses. Cela comporte un danger, il faut éviter de le faire tomber dans un coma hypoglycémique. Il faut une surveillance très stricte du sujet.

Dans ces conditions, nous avons l'habitude d'administrer quand même du sucre, par voie sous-cutanée puisque le malade ne peut pas l'avaler, dans la proportion de un gramme pour une unité d'insuline.

Je vous le répète, je vous donne des chiffres un peu absolus. Chaque cas a ses indications particulières, mais dans un cas comme celui-là, il faut une surveillance de toutes les minutes; il ne faut pas quitter son malade jusqu'à ce qu'il soit opéré.

Donc, ce sur quoi je veux insister, c'est sur le fait qu'il n'est pas impossible de mettre un diabétique dans l'état d'un sujet normal, capable de recevoir n'importe quels soins.

Si vous avez à faire des soins beaucoup plus lents et étendus dans le temps, votre préparation sera moins stricte. Supposez que vous deviez opérer demain un malade et que je le voie cet après-midi. Je le mettrai à une cure de jeûne et cela fera tomber son sucre dans des proportions considérables; la dose d'insuline sera beaucoup moins forte. Si vous devez opérer dans trois jours, je le mettrai à un régime et s'il n'est pas

prêt, je ferai de l'insuline ce jour-là. Nous arriverons au point que vous aurez fixé à l'état normal chez ce sujet-là et dans ces conditions l'opération se passera de la façon la plus simple.

Mais—car il y a un mais—il ne faut pas envisager l'opération, puis l'opération faite, dire au revoir à son malade. J'ai vu récemment à l'Hôtel-Dieu une malade opérée pour fibrome; je l'avais bien préparée, mise au point pour l'opération. On l'opère, cela se passe fort bien. Mais on oublie de continuer le traitement. La malade tombe dans le coma. Il faut donc se préoccuper des suites opératoires.

On ne guérit pas du diabète; c'est une chose que j'affirme à mes malades dès le premier jour. Il y en a beaucoup qui tendraient à croire le contraire et les quatrièmes pages de journaux le leur font croire en leur proposant des traitements qui les dispensent de suivre un régime, ce qui amène des désastres. Donc, le diabète ne guérit pas, mais si le malade se soumet constamment au traitement, il sera dans l'état d'un sujet normal. Vous avez mis un sujet en état de recevoir n'importe quelle intervention; mais il faut continuer à le maintenir dans cet état normal et ceci est aussi important que de l'avoir préparé à l'intervention.

Je le répète, l'opération a réussi, le malade est rentré dans sa chambre; on ne s'est plus occupé de son diabète; ceci est une erreur; il faut continuer à traiter le malade comme avant l'opération, le suivre d'une façon un peu moins stricte, mais tout de même rigoureuse, et s'assurer qu'il n'a pas de sucre dans ses urines, qu'il ne fait pas d'acidose, s'en assurer pendant les quatre ou cinq jours qui suivront, période critique, comme dans toutes les opérations d'ailleurs.

Je vous ai exposé des faits de pratique que j'ai cru les plus simples pour vous montrer que le traitement du diabète n'est pas aussi redoutable qu'on le pense, quoique tout de même il y ait un certain doigté que l'expérience nous enseigne. Cette thérapeutique n'est pas au-dessus de nos ressources et nous devons faire bénéficier nos malades de tous les soins que nous appliquerions à un sujet absolument normal.

Les Granulomes

Jusqu'à une période très récente, en effet, la distinction entre le granulome et le kyste n'a pas été faite et cette lésion n'a pas fait l'objet d'observations ou de travaux spéciaux; puis, après un temps relativement court, où nous voyons des auteurs comme Malassez et Galippe, malgré un désir d'unification, d'ailleurs excessif à nos yeux, ne pas rattacher les granulomes aux tumeurs d'origine épithéliale, nous en arrivons aux travaux très proches de nous où l'on s'efforce de démontrer que le granulome n'est qu'une étape sur le chemin du kyste ou, au contraire, qu'il est une lésion d'origine inflammatoire ou infectieuse indépendante de celui-ci.

Ces rapports possibles étant étudiés par ailleurs, nous n'y reviendrons pas.

Retenons cependant la définition que donnent des granulomes Delater et Bucher, dans un travail de 1923, cité au chapitre suivant:

Les granulomes sont "de petites tumeurs solides, de constitution histologique toujours la même, adhérentes à la racine de dents à pulpe infectée, habituellement appendues à l'apex, mais parfois accolées le long de la racine, ne se traduisant le plus souvent que par des manifestations cliniques minimales, reconnaissables à la radiographie, accompagnant, en général, la dent lors de son extraction."

En 1926, Armando Royas, qui adopte d'ailleurs l'opinion selon laquelle le granulome représenterait un état de transition entre les véritables inflammations chroniques et les tumeurs, nous donne les signes cliniques caractérisant cette affection.

1o Déviation de la dent du côté opposé au siège de la tumeur; 2o Diminution de la sonorité normale à la percussion; 3o Mobilité de l'apex à la palpation; 4o Vibrations de l'apex à la percussion; 5o Crépitation.

En 1931, Arthur Bulleid, sur le travail duquel nous revenons par ailleurs, affirme que le granulome est le résultat d'une réaction de défense de l'organisme contre l'attaque d'un agent microbien peu virulent ou même contre une inhibition due à une substance chimique. Il nie formellement que nous nous trouvions en présence d'une formation néoplasique.

La même année, Marmasse, dans un rapport très intéressant que nous analyserons plus loin, nous rappelle la théorie qui semble classique du granulome, puisqu'elle résulte des travaux de Malassez seul, en 1884, 1887 et 1888, puis en collaboration avec Galippe, en 1910, où sous la désignation de fongosités radiculo-dentaires, ils étudient l'affection; de ceux de Rédier, de Lille, en 1907, qui l'appelle granulome; de ceux de Cavalié, de Bordeaux, qui parle de fongosités apexiennes, mais qui tous, malgré les différences de terminologie, signalent la présence *constante* de tissu de bourgeonnement, donc conjonctif, et celle *inconstante* de tissu épithélial.

Marmasse nous montre ensuite la majorité des stomatologistes, à la suite des travaux de Bercher et Delater, en 1923, se ralliant à l'idée du granulome "dysembryoplasie épithéliale, première étape des tumeurs périradiculaires des mâchoires" et, enfin, la réaction et le retour à la théorie inflammatoire avec Grandclaude et Lesbre.

Comme nous le disions au début de ce chapitre, la plupart de ces travaux étant analysés ou cités au chapitre suivant, nous n'y insisterons pas ici.

En 1932, dans la *Gazette des Hôpitaux*, Charles Ruppe nous présente le granulome comme la suite d'une gangrène pulpaire à virulence microbienne atténuée ou d'erreurs de technique consécutives à des soins dentaires.

Il nous donne l'anatomie pathologique et la symptomatologie du granulome que nous ne pouvons que citer textuellement:

Anatomie pathologique.—Microscopiquement, le granulome est un bourgeon charnu, en général de petit volume, appendu à un apex dénudé et adhérent au ligament alvéolo-dentaire. Il est rouge foncé, friable au début, il durcit en vieillissant. Parfois, il est volumineux et se présente comme une véritable languette charnue.

Histologiquement, le granulome possède ou non de l'épithélium. Avec le professeur Lucien Cornil et en analysant les travaux de Galippe et Malassez, de Delater et Bercher, de Grandclaude et de Lesbre, de Proehl, de Noyes et Fisher, des Ropas, de James et Counsel, pour ne citer que les plus importants, nous donnerons la description histologique suivante du granulome.

Granulome simple.—La question du granulome dentaire a été trop spécialisée. Il n'y a que fort peu de différence entre le granulome banal, cutané ou muqueux. Le granulome est dû à une infection atténuée, prolongée, peu virulente du tissu conjonctif recouvert d'un tissu de recouvrement de protection. C'est le type de l'inflammation subaiguë aboutissant à la production de tissu de granulation.

Ce tissu est essentiellement constitué par:

1o Une réaction proliférative du tissu conjonctif commun, fibro-blastique, avec ou sans transformation scléreuse de la substance fondamentale;

2o Une réaction vasculaire intense, congestion vasculaire et réaction hyperplasique, permettant de suivre tous les stades de néoformation des vaisseaux;

3o Présence en plus ou moins grande abondance des éléments libres du tissu conjonctif. Dans les réaction très prolongées, ces éléments sont susceptibles de disparaître. Au début, ce sont surtout des polynucléaires. Dans les infections prolongées et très atténuées, il existe de nombreux lymphocytes. Mais les plasmocytes constituent un des éléments les plus caractéristiques du granulome. Son origine histocytaire ne saurait être mise en doute. On ne les rencontre pas dans les vaisseaux et l'on peut assister à tous les termes de passage entre les cellules du tissu conjonctif commun et les plasmocytes.

(à suivre)



By courtesy of Evangelical Publishers.

An Outpost of Empire—Guarding our way of life.

"I am the Spirit of Dentistry. I am Art Inclusive of Arts. I am young compared to other learned professions, still I have lived a long time and have accomplished much in my span of years. In the early period of my existence my importance was unrecognized, my place was unestablished, my literature and learning were unsystematized and my instruments were crude.

"But I have made great and rapid strides through the years. I have made my place. I have established my importance among the learned professions and healing arts. I have drawn to my shrine great and noble men, profound students, excellent scholars and teachers.

"I have contributed much toward the alleviation of pain and suffering and added much to human happiness. My art is such that I not only assist in the great combat against disease, but with the touch of my hand, displeasing and ugly features are made beautiful, often thereby ministering to a mind diseased.

"I have played an important part in the prolongation of life. I am an integral part of our modern culture and civilization. I have used learning and scientific discovery, not for the purpose of destroying life, but in an effort to enhance it. I am young and strong. I have pinnacles of idealism toward which I strive. I am modern. I am progressive. I am Art Inclusive of Arts. I am Dentistry."—Journal, Ohio State D. Soc.



H. M. CLINE, D.D.S., Vancouver, British Columbia
British Columbia Editor of the Journal of the Canadian Dental
Association.

Past President of the British Columbia Dental Association,
Vancouver Dental Society, and Vancouver Ferrier
Study Club.

Graduate of the Royal College of Dental Surgeons of Ontario.
Practised in Chicago and now in Vancouver.

Served in France during the last war with the 72nd Battalion
(Seaforth Highlanders).



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Post-War Dentistry*

by D. W. GULLETT, D.D.S., Toronto, Ontario.

PLANNING commissions for postwar purposes have been set up by practically all bodies of importance, governmental, professional, industrial, and those representing all organizations which have to do with the intricacies of our present way of life. All means of communicating intelligence, the newspaper, the radio, the magazine, the professional journal, are vehicles of the thought, the gist of which is expressed in the term "changed way of life" or "greater freedom to come after the cessation of war". The words "social" and "revolution" used carefully and sparingly a few years ago in order to avoid criticism are now boldly filling the printed columns. That we are passing through a social revolution while at the same time engaged in this terrible conflict, goes without saying. It is freely admitted by both those in authority and those without, that the people who had most will have much less in the future and those who have had little are about to have much more. Already there is at least some inkling of how this can happen to us economically. The profession of dentistry cannot escape this period of adjustment in the progress of civilization. There is no question that it is to be faced. The real problem is how dentistry can fit into the new arrangement to come. Members of the profession should be cognizant of the background of this social movement in order to understand the present situation.

SOCIAL SECURITY

What does the term "social security" mean? Currently it is now said that Canada has been backward in adopting social security while other countries of the world have gone ahead. A short review of contemporary, world-wide social history will partially confirm this view. War leaders have proclaimed this war as a war for greater freedom and social security. The social hazards of life are sickness, unemployment, permanent disability and invalidity, old age, industrial accident and disease and premature death. Social security aims at the protection against, prevention of, and alleviation of the results of these contingencies.

These hazards of life have practically all been provided for by private and voluntary means in the past, for those who could afford the required payment or availed themselves of the opportunities offered. Various forms of insurance policies and annuities have been procurable by means of which men have created an estate for the protection of their families and for old age. Voluntary groups have been formed in diverse arrangements whereby under stated conditions certain contingencies would be undertaken. These arrangements have been, for the most part, extremely popular and many of them will continue to exist no matter what new schemes are adopted. However, it is to be pointed

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out that they all fail to help the individual who most needs the assistance, for he, not having the wherewithal to pay, or failing to make provision for the future when he has it, remains unprovided for in case of emergency.

The sociologist points out many incongruities in our form of civilization for which a solution must be found. He says wages are not geared to the number of dependents; one sickness may wipe out a lifetime of savings and permanently reduce the family standard of living; easily over 80% of people need dentistry who cannot afford it; all of which is true and begs some form of solution. The futility of the argument, that more money is spent on luxuries such as tobacco, chewing gum, cosmetics, etc., than for dentistry, has been proven. Reformers in the past have been using that argument to no apparent avail. People will spend for immediate luxuries and people in general will not budget for inestimable, distant and perhaps avoidable dental disorders. The young and the old needing attention the most have the least to provide for their health needs. Such is a sample of the arguments as advanced today by the thinker in social science.

How can social security be attained? This country has already achieved some of this program. There was recently adopted unemployment insurance, which is a definite part of the movement for social security. Old age pensions, mother's allowances, pensions for the blind, are examples in the same category. The provision for recipients of relief during the last decade is an illustration of the same idea, which was to most observers very unsatisfactory. The treatment of the industrial accident and disease group under the Workmen's Compensation Acts as set up in the various provinces has been the most satisfactory type of such service adopted so far in Canada. In general, there are two objects in social security: first, to compensate the affected individual

for loss of time, at least partially, which is generally called "cash benefits"; second, to provide "benefits in kind", such as medical and dental care. It is true that all these things have been possible through private means to a small minority of people but social security aims to provide the facilities to give such benefits to all or nearly all the people.

HEALTH INSURANCE

The uncertain visitations of those things affecting the health and premature death of the individual are still left among the hazards of life for which no provision on a national basis has been attempted in Canada. Two main obstacles have stood in the way of any method of dealing with the matter; first, the tremendous cost, and second, the difficulty of finding a suitable method of operation. In over forty countries, the method adopted has been a form of health insurance, otherwise known as sickness insurance or social insurance. This movement began in the last century and during the last thirty years, more and more countries have adopted some variation of a scheme for health insurance. By this method it is usual for the government, the employer and the employee to make equal contributions toward the payment for health services. Provincial governments in Canada have given thought to health insurance. The British Columbia government actually passed a health insurance Act in 1936 and the Alberta government in 1935 gave considerable attention to the matter, but in neither case was the Act put in force. Many other ways of dealing with the problem have been attempted in Canada. Consideration has been given to the matter by the Dominion Government as far back as 1928 and much investigation since that time has been undertaken. In June, 1941, the Federal Department of Pensions and National Health began a study of public health and medical services

with the object of drawing up a health insurance plan for this country. Discussions were begun with all the national health organizations of Canada. The Canadian Dental Association was requested to form a special committee to deal with the matter in co-operation with that Department. On February 5 of this year, an order in council was passed by the Federal Government creating a Government Advisory Committee on health insurance. This committee is composed entirely of representatives of various departments of the Dominion Government and is in the process at the present time of consulting with the various groups such as those representing medicine, dentistry, nursing, hospital, pharmacy, industry, labour and women's urban and rural associations. No recognized health organization in Canada has opposed health insurance in theory but the difficulty arises as to the method of administration.

For some time the C.D.A. through its various committees has been in the process of gathering information concerning health insurance and its relationship to dentistry. The work was quickened when a request was received from the Government Advisory Committee for the presentation of a plan for dental health insurance on or before June 15 of this year. A plan was prepared together with principles under which dentistry was willing to co-operate and these were sanctioned at the May meeting of the C.D.A. On June 9, this proposal was presented to the Federal Government Advisory Committee at Ottawa. Both the plan and principles have now been published in the September issue of the Journal. While the plan is by no means perfect and is already subject to some revision, it does express the general thought of Canadian Dentistry today on this subject.

C.D.A. PROPOSED PLAN

The structure of the proposed arrange-

ment as submitted is supported upon three essential fundamentals.

- (a) Protection of the basic formulae for good dentistry.
- (b) Dental autonomy.
- (c) Fairness both to the insured and those rendering the services.
- (a) *Protection of the basic formulae for good dentistry.*

Two distinct types of dental service are possible under any plan: first, a partial service to all or nearly all the population, and second, a complete or adequate service to as large a number of the population as possible. It will be remembered that earlier in this paper it was said that social security aimed at providing such services in a manner that none would want for them. Organized dentistry has repeatedly proven that the only worthwhile dental service is an adequate or complete service and further, that the service, in order to succeed, must be preventive in form. With a dental personnel in Canada of approximately 4,000 and a population of some 11,500,000, the difficulties of adjusting the principles of good dentistry to the movement for social security will be appreciated by all dentists.

The plan was drafted for complete service to as large a part of the population as thought possible upon a preventive basis. The dentist well knows that true dental prevention can only be correctly applied through the child. The initial insured group as recommended consists of children up to the attainment of age 16. Thirty percent of the population, or roughly, $3\frac{1}{2}$ million, are of this age group. Even after deductions are made for those under the minimum age for dental care and other reasons, the number is considered beyond the capacity for the dental profession in Canada to render adequate service. As a result, a reduction in the suggested age limitation is being recommended.

The great obstacle against the introduction of any plan for dental service on

a large scale has been the backlog or the initial dental care needed. By beginning the plan among the young, this backlog is at the minimum.

One of the main points seriously considered in formulating the proposed plan was to avoid ever having to meet the accumulated dental need. By the present proposal, just as soon as conditions warrant, after the plan has been in operation, the age will be raised one year and then another year as conditions become favourable. By this method, the vast majority of those added to the insured group will have been formerly under the arrangement. In order to expand the scheme, there will need to be a definite increase in operative personnel, so that if health insurance is introduced including dentistry, ways and means will have to be found to provide a greater number of dentists of the proper type. This matter is already being given some consideration.

In addition to the children up to the age decided upon, it is quite possible that some other groups of people will have to be added through government insistence. Those people who have been classified as indigents in the past will very probably have to be given some form of service. All those receiving government pensions are possible additions. It will be necessary to specify very carefully the type of service such groups are to be given. Arranging a partial service for part of a group of people is an exceedingly difficult proposition both economically and in the regulation of the actual services for all concerned. The main feature, however, of the whole plan will be to begin with adequate dental care for children. Any other groups or services should be undertaken only for very definite reasons so as not to interfere with the truly prophylactic nature of the whole plan.

The phases of this whole matter are so numerous that it is difficult to select specific parts for presentation in a short

paper. In order to illustrate the intricacies of the subject, the following example is given. The plan by the C.D.A. states in definite terminology, complete dental services for a stated group of people, nothing less and nothing more. Reference to other plans indicates that great difficulty arises if any plan is adopted where the type of service and the group included are not manifest. There are health insurance plans in existence which include dentistry under the following terms: "dental services limited to measures essential to health". Such indefinite terminology does not adequately describe the part to be taken by the dental profession in such a plan.

Let us consider this matter further:

(1) Who is to determine when a dental operation is essential to health? Dentistry appears in some plans as a mere side issue or afterthought. A clause is probably inserted in an Act which originally may have neglected dentistry entirely, and then, when it was found that the essential health service of the dentist must be included, some such wording was added. By the arrangement of some health plans, it would often appear that the decision as to whether a dental condition is affecting the health of an individual or not will very likely *not* be made by the dentist. This position in which members of the dental profession would be placed is untenable and would surely lead to loss in professional status, to say the least. Furthermore, the dental profession knows that the beneficiary under the plan would lose in those benefits which only the dentist and no one else can render.

(2) When does a dental service become one essential to health? A study of plans operated in various countries shows that this has become a difficult and deceptive question when placed in the legal terminology of legislation. The interpretation placed upon the term "essential to health" has placed the dental

profession in some countries in a most apprehensive position. The question has at times attained political significance in the interpretation of the Act which usually resulted in a diminishing benefit to the dentists concerned.

To the whole dental body it is obvious that one carious tooth or the absence of teeth entirely and all those conditions to be found between these two extremes are to be considered as conditions "essential to health" of the individual. Where, then, is there to be found use for the word "limited" or as in some plans, the words "only such services" as are essential to health, in the framing of a health insurance plan for dentistry?

The fact is, in most instances, an arrangement containing such indefinite wording with reference to dentistry was too often adopted and then the trouble began. At times, the extraction of teeth only, was interpreted as the meaning. This resulted in adequate proof being immediately produced, especially in those countries where cash benefits were payable under the plan, to prove that dental service "essential to health" meant more than that interpretation. Consequently, expansion of the dental services became an immediate demand on the part of the recipients and corresponding promises on the part of a benevolent government were made, often without adequate benefits to those rendering the services.

The success of health insurance in the dental field will depend largely upon provision being made for adequate dental care for all those coming within the limits of the plan for dentistry.

Recovery of lost opportunities among the dental cripples of the nation can never be accomplished even if the enormous financial considerations were underwritten. Dentistry has known for many years that scientific dental prophylaxis can only be applied successfully during childhood. Canadian dentistry supports these facts as being fundamental

to the practice of good dentistry and furthermore does not willingly desire to disregard them.

(b) Dental autonomy.

An old, old adage says, "If you want to get something done, you had better look after it yourself." It applies here. The Canadian Dental Corps which as we all know is entirely independent, has received much favourable comment and we are justly proud of the way our profession is represented. In the event that health insurance is introduced, dentistry can do in civilian life equally well in any arrangements for dental services if an opportunity to do so is obtained.

One hundred years of dental history on this continent has well established the point of dental autonomy. Every attempt, and there have been many, to integrate dentistry into medicine, up to date has not resulted in gained ground for our profession. There exist certain definite reasons for this fact which may be stated somewhat as follows: some 98% of the population have dental disease, hence there are no averages like the other diseases of mankind; the treatment is generally more intricate and time consuming; the practice of dentistry is probably 1/3 biological and 2/3 made up of the exact sciences whereas medicine is composed of reverse proportions; the basic cost of dental service is vastly different from that of medicine; dentistry is recognized by the general public as a separate profession and that view is supported by both legislation and associations.

The relationship of dentistry with medicine, for best results, according to past experience, must be one of utmost collaboration rather than any form of integration. The committee unanimously agreed that dentistry must stand on its own feet at such a critical period as when entering into an agreement as the present one, affecting the whole practice of dentistry. Furthermore, it should be stated

that full assurance has been given your committee that dentistry will be permitted to conduct its own affairs at all times.

Asserting the right to conduct all that pertains to dentistry and the actual performing of the duties are separate things. The former involves the principle but the latter carries the responsibility. If the dental profession is to assert itself as ready to take its rightful place in a health insurance plan, then dentistry must be in readiness to shoulder the necessary responsibility.

The whole problem of administration of dental service under health insurance is embodied here. This matter has been under study during the past summer by committees set up for health insurance study in every province. The amount of authority obtained will in some measure depend upon the amount of responsibility that the profession is willing to assume. Two things are essential in order to take our rightful place. First, professional organizations must be thorough and complete so that confidence is established in them. And second, sufficient financial backing for the care of professional matters must be assured. If dentistry fails to take up its responsibilities, some other authority most assuredly will do so. No other group or organization is equipped to deal with dental matters. The dental profession as a whole must stand solidly behind their organizations.

The Dominion administration of the whole proposed plan will be either under a division of a Department of the Federal Government, or, under a Commission. The C.D.A. proposal requests that it be administered by a commission. A commission is favoured because it is believed that there would be less political interference and a larger possibility for professional control. It is true that the party in power appoints the commission but the appointments would undoubtedly be made for varying terms of years so that with changes of government, the com-

mission becomes varied politically. The members of a commission do not have to go back from time to time and get votes. Upon the personnel, and number of the commission, depends the opportunity for obtaining professional independence from political entanglements. The increase in number of dental practitioners under such a proposal would justify dental representation on the commission. Similar commissions are usually composed of three, or at the most, five, individuals. If dentistry were to obtain representation, it would seem to be necessary that the commission be composed of five.

In each province it has been proposed that there be established a dental committee to be appointed by the provincial dental board and vested with as much authority as thought possible to obtain or wise to assume for the administration of the plan. Some division of each province into districts or regions is to be made and it is suggested that over each district a dental officer shall be appointed. This dental officer is to have numerous duties covering the entire provision of dental services for all those coming within the insured group in his region. The exact relationship and duties of this personnel is now being worked out for purposes of presentation to the Government Advisory Committee on Health Insurance.

The success of the whole plan as far as dentistry is concerned will depend upon the authority allotted to the provincial dental committee and the stipulations which are allowed the regional dental officer. To a large extent, the type of individual chosen to act as Dental Officer will be vital. He must possess the confidence of the public and his confrères, as he becomes the key man between the individual and the service to be rendered.

(c) *Fairness to insured and those rendering the services.*

No arrangement is possible on a permanent basis which does not deal fairly

with the one receiving the service and the one rendering the service. Reversely, it can be stated with assurance that the success of the whole plan will depend upon fair dealing with all concerned. No dentist asks for more than an equitable arrangement. Professional health organizations have continuously advocated and indeed, attempted to educate the public, and governments as well, toward the need for a greater distribution of all necessary health services. The only fear any dentist has in regard to the adoption of health insurance is that he may find himself and his profession treated unfairly under the plan.

In all fairness to the government authorities dealing with this matter, it should be said that statements have been made to us that there is no intention to change the present established form of dental practice. The adjustment of the insurance principle so as to not disturb the present mode of practice is one of the aims, we are told. This assurance we take to mean several things, the chief of which is that dentistry will continue to be practised in the private office of the individual dentist in any contemplated scheme that may be adopted.

The retention of certain rights long since recognized as the prerogatives of the dental profession is an important matter. Chief among these is the matter of discipline of the members of the profession. The profession should be most observant regarding the right of discipline. This right belongs at all times to the profession itself and must not be surrendered. The transference of such power would not only work to the disadvantage of the dentist but also ultimately to the inconvenience of the insured as well.

This matter of professional discipline has proven to be most important in other plans and has been a dominant feature in successful arrangements—e.g. the British Health Insurance Act. Otherwise, auto-

cratic powers become vested in the ruling authority of the arrangement, be it the Minister of the Department or a commission. The control of dental practice as performed under the plan must rest under dental authority and not be dictated by personnel outside the profession.

SUMMARY

The initiation of the plan will mean that our professional activities will necessarily need to be accelerated. Consequently, certain proposals have been made to the government which will of necessity need to accompany the introduction of the scheme.

The number of dentists will need to be drastically increased in order to cope with the number of the insured, especially to make provision for the expansion feature of the plan. The dental schools of Canada are not equipped to produce many more graduates than they are doing at the present time. Consequently means would have to be found and financial support given for the expansion of dental schools that would need to be made.

The education of the public upon dental health is an important adjunct to the whole scheme. This has been adequately proven through dental professional activity in this matter during the past years. The need would be enhanced with the greatly increased proportion of the public receiving dental services. Public dental health education would need to be drastically enlarged and it was proposed that an adequate grant would be necessary for the purpose. The matter of educating the members of the dental profession themselves with regard to public dental health is an added necessity. The dental profession realizes that such expenditure of funds would ultimately reduce treatment costs.

Dental research would become a more insistent problem than ever in an effort to reduce the incidence of dental disease. The research effort would need to be

stimulated in some proportion to the increased problem. It was proposed that an adequate grant be made for this purpose.

These proposals have in turn caused the C.D.A. committee a great deal of work because we have been requested to definitely state amounts, intended procedures and recommendations in detail for the introduction of these matters into the proposed legislation. As a result, questionnaires were prepared and the work is in the process of being correlated at the present time.

It is impossible to say now when a plan of health insurance for Canada will be drafted into the legislation. The Government has requested the co-operation of the dental profession and that co-operation is being given to the best of our ability. Owing to the question of personnel and finances, even though legislation is passed, it seems reasonable to believe that the introduction of the plan would take place as a postwar measure.

In re-statement of the opening paragraphs, it appears from every angle that some such social legislation as health insurance is certain to appear. Every document from the Atlantic Charter to the latest draft of a political party platform includes the measure as a prominent part. The July issue of *Fortune* magazine carried a survey on the subject which resulted in 74.3% in favour of the adoption of health insurance in some form. The Canadian Institute of Public Opinion, as a result of a Gallup poll, released on April 8, 1942, the statement that between 7 and 8 out of every 10 Canadians are in favour of a contributory national health plan. This method of obtaining information has proven fairly accurate and it must be considered that these polls have tremendous political significance. It cannot be said with any degree of ac-

curacy, but statements have been made that a poll of the present members of the Federal House indicates over 2/3 in favour of a health insurance plan. Under such conditions as these, it seems reasonable to conclude that postwar dentistry will include dental health insurance in some form. Can a satisfactory plan be formulated for dentistry in the arrangement? It is believed by those who have studied the matter that it is possible under definite and known conditions: viz.—

- (1) That organized dentistry be entrusted with a proper part of the administration as far as the members of the dental profession are concerned.

- (2) That the plan be unfettered by outside interference, political or otherwise.

- (3) That adequate financial support for the practice of good dentistry be provided.

- (4) That there be strict observance of the eleven principles for dental health services as laid down.

The adoption of a health insurance measure as proposed by the Federal Government will drastically affect every dentist in Canada. In fact, with the gradual expansion of the plan, the entire mode of practice we now know may be radically changed by the introduction of such legislation. The C.D.A. Committee, at the request of the Federal Government Advisory Committee on health insurance, is making every effort to co-operate by presenting the principles which underlie the best dentistry has to offer for the insured and those rendering the service. This is a national dental problem. All dental organizations in Canada and all provincial bodies must give united support to this national effort for the benefit of the health of the nation and for the future of dentistry in Canada.

"A day well spent is a good stone placed in the cathedral of character."

Migratory Abscess of the Jaw*

REPORT OF A CASE

by W. L. ELLIOT, D.D.S.,† New York, N.Y.

IT IS A WELL KNOWN fact that an abscess travels in the direction of least resistance to approach the surface of the body. A simple dental abscess may not seek a direct approach to the surface however, but may turn inwards to deeper and more involved structures.¹ This is possibly due to the complicated arrangement of the muscles and their attachments about the face and jaws. The migratory characteristic of a dental abscess has been well demonstrated in the following case report. The case is not only interesting from a diagnostic viewpoint but it reveals the necessity for closer observation by dentists in the management of soft tissue infection about the face and jaws and also a better understanding of the harmful sequelae if such a condition is not correctly diagnosed and treated.

REPORT OF A CASE

J. K., a 42 year old white woman, was admitted to hospital on June 1, 1941, complaining of swelling and tenderness over the entire right side of the face for the previous three months.

Past History,—On April 1, 1941, the patient had an upper right wisdom tooth extracted during a periodic dental examination. On April 8, 1941, the patient complained of considerable pain in the upper right cuspid region, along with moderate trismus. On April 22, 1941, the patient returned to her dentist and asked that an x-ray of the jaw be taken. Instead, she was referred to her physician who stated that she was suffering from neuralgia, and codeine was prescribed without relief.

A month following extraction, the patient still complained of trismus accompanied by pain and swelling of her right cheek, and this time an incision into the buccal gum tissue was made, allowing considerable pus to escape from the region of the lower right third molar tooth. Following this operative procedure, the patient was told she had a tic "which did not act like a tic". In order to prevent the jaws from closing entirely, a bite-plate was made which proved uncomfortable and no improvement resulted. Her physician referred her to a university dental clinic and following x-rays of the jaws, the patient was told that the jaw was dislocated and required wiring. This latter procedure was never performed and she was informed that the salivary gland had become infected.

The patient's general condition had steadily become poorer and she had lost 15 pounds in weight since the beginning of her illness.

Examination on admission to hospital;—There was marked swelling and tenderness over the entire right side of the face. The jaws were practically closed and severe pain resulted if any attempt was made to open them. The temperature was 100.2°F. and pulse was 84.

Laboratory Findings,—
Hemoglobin, 11.2 mgms.
Erythrocytes, 4,500,000 per c. mm.
Leucocytes, 15,000 per c. mm.
Polymorphonuclear leucocytes, 85%
Lymphocytes, 10%

Dental roentgenograms and lateral plates were negative for infected roots or evidence of bone destruction.

* From the Department of Oral Surgery, Presbyterian Hospital, New York, N.Y.

† At present Dr. Elliot is serving with the Canadian Dental Corps, attached to the R.C.A.F.

Past Medical History,—Past history of the patient was negative for Tuberculosis, Carcinoma, Diabetes, Malaria and Specific Infections.

Differential Diagnosis,—

1. Chronic Subperiosteal Abscess of Right Mandible.
2. Chronic Osteomyelitis of Right Mandible.
3. Actinomycosis of Jaw.
4. Blastomycosis of Jaw.

Subsequent Course,—On June 2, 1941, incision and drainage of the right mandible was performed in the hospital. Blunt dissection with curved scissors was extended up to the upper third of the ramus to drain the masseter space. Approximately 3 cc. of frank yellowish pus were recovered and an iodoform drain was inserted. Bacteriologic study was negative for actinomycosis. The patient was administered 1 gram of sulphathiazole every four hours by mouth and within one week the swelling, temperature, and trismus were remarkably reduced. The patient was discharged to her home on June 8, 1941, with a minimal amount of drainage and trismus present.

On October 11, 1941, she was again admitted to the hospital, complaining of marked tenderness and swelling over the entire right temporal fossa. The right ear was painful and the right lower eyelid had swollen suddenly. The trismus was increased. A small tender mass was present over the upper third of the ramus of the mandible at its anterior border. The patient's temperature was 100.4°F. and there were 10,000 leucocytes per c. mm. with 74% polymorphonuclear leucocytes.

A horizontal incision was made at the upper border of the right temporal fossa (Fig. 1) anterior to the helix. The superficial temporal fossa and muscle were exposed. With blunt dissection, a small direct opening was carried to the bone, which was slightly eroded, the perio-

steum having been stripped. No pus was recovered. From this incision, a small tract was extended downwards, below the superficial fascia but superior to the attachment of the temporal muscle, until the right tuberosity was located. The original incision was enlarged and probed but the two openings were not joined. Again no pus was obtained. Bacteriologic cultures obtained revealed no anaerobes, and there was no growth at 24 hours but staphylococcus aureus hemolyticus grew at 48 hours. A blood culture did not grow organisms in 48 hours. 1 gram of sulphathiazol every 4 hours was administered by mouth until a level of 15 milligrams per cent was obtained. Hot compresses every hour were instituted and considerable pus was found at each change of the dressing. Since a small tender mass still persisted in the right tuberosity region, a third attempt to find the source of infection was undertaken two days after the second operation. Using intravenous sodium pentothal anaesthesia, the buccal gum tissue overlying the second and third molar region was incised and a haemostat passed in the direction of the swelling. This procedure yielded no pus. At the end of a week in the hospital the patient was allowed to go home. Some trismus still remained.

The patient was re-admitted for a third time on December 4, 1941. On this occasion she presented a small red, tender and fluctuant swelling directly over her right temporo-mandibular joint. Trismus was increased as well as swelling over the right side of her face. She complained of considerable pain in her right ear. In order to free this pus, a small angular incision was made directly into the swelling (Fig. 1) and about 1 cc. was recovered. A groove-director was passed from this opening downwards to join the first incision. A piece of $\frac{1}{4}$ inch iodoform gauze joined the two. Bacteriologic cultures revealed no growth at 24 to 48 hours. Again the swelling, trismus and

discharge lessened so that the patient returned home in 5 days.

On January 8, 1942, the patient was again re-admitted with severe pain and swelling over her whole right temporal fossa. Her admission temperature was 99.2°F. and the blood picture was very similar to that in the second admission. Using avertin and ether anaesthesia, the previous incision into the upper anterior temporal region was enlarged and an opening again carried to the cranium. Again no pus was found. A straight line incision was made at the point of greatest convexity and fluctuation in the temporal region (Fig. 2). Approximately 15 cc. of thick pus poured from under the whole of the temporal muscle. Lateral extensions were made with the index finger to break down any partitions. The wounds were kept open with vaseline gauze and small Penrose drains inserted. Warm compresses as before produced considerable discharge for 3 days following the operation. Bacteriologic cultures obtained at the time of the operation revealed no growth. On the fourth post-operative day, a culture from the lower incision revealed staphylococcus aureus hemolyticus. The patient made an uneventful recovery and was discharged after 8 days, free from all former symptoms including the trismus.

DISCUSSION OF THE CASE

From a dental standpoint this case illustrated clearly how easily infection can remain in the soft tissues for weeks or even months, reappearing intermittently at various distances from the original site. The invading organism followed an unusual course for an infection of this nature. Upon the extraction of the upper right third molar, bacteria which are harmless in the oral cavity, were introduced to less bacterial-resisting tissues. The infection drained downwards in the soft tissues and abundant lymphatic system about the face and eventually an



Figure 1

Drains in place for drainage of right masseter space and right temporal fossa. Middle drain is result of fourth operation, following acute swelling directly over temporomandibular joint.

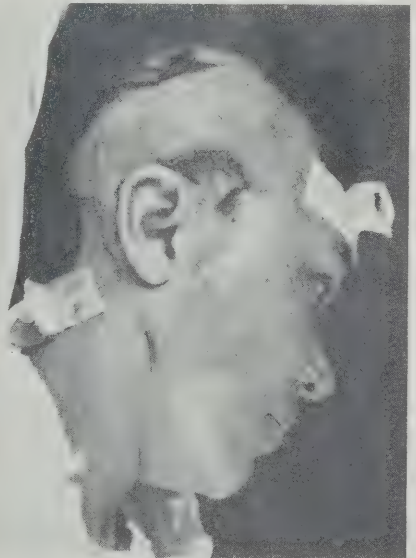


Figure 2

Drains in place for complete drainage of right temporal fossa. Lower two wounds have healed. Infection now confined to temporal fossa.

incision was made and drainage obtained in the lower right third molar region. Whether walled-off bacterial pockets had formed in the upper and lower third molar regions which were not drained by local incision or whether the systemic resistance of the patient was low cannot be determined. Bacteria migrated upwards under the right masseter muscle to its deep attachment along the medial and lower borders of the right zygomatic arch. The infection spread easily through the infra-temporal fossa to gain access to the temporal fascia and the temporal muscle and fossa. Dunning² feels that prolonged infections of this nature originate from a lower molar extraction rather than an upper molar extraction. The close proximity of the masseter muscle to the lower molar area and its continual contraction and relaxation, obviously necessary to open and close the mouth, greatly facilitates the spread of any invading organism.

A careful history makes possible an early diagnosis which will permit treatment and in some instances the infection may be aborted³. If the patient had been confined to bed following the first sign of infection and advised to keep the mandible at rest as much as possible with a soft or full fluid diet, the course of events might have been different.

The length of time that elapsed from the extraction of the first tooth to the localization of the infection in the temporal fossa was nearly 8 months. This factor alone is the probable answer to the negative cultures that were taken at each of the 5 operations. Chronic infections of long standing have a tendency to become sterile, particularly if one of the sulphanilamide-family drugs has been administered. With only one positive bacteriologic report of 5 submitted

for study, staphylococcus aureus hemolyticus can be definitely ruled out as the invading organism. It is quite possible that very delicate organisms difficult to grow were responsible in this case. Repeated dark field examinations and the use of special media, appropriate for anaerobes peculiar to the oral cavity, might have thrown some light on this question. Blood cultures were negative. The actinomycosis fungus was never found. The actual causative agent was not determined.

Whether this series of operations was started from a simple extraction or whether infection was introduced by unsterile forceps or needle cannot be ascertained. Only one experience with such a case is necessary to instil the absolute necessity of maintaining a sterile technique without one small break in the routine.

Deep infections of the face and jaws should be considered very serious⁴. It is necessary to assist nature in localizing the infection and to institute drainage as soon as possible. The responsibility of the dentist is not so much how to incise and drain a soft tissue infection but when to incise, bearing in mind the serious complications which may result if no improvement is seen.

The author is indebted to Dr. Henry S. Dunning, Attending Oral Surgeon, Presbyterian Hospital, New York, N.Y., for permission to report this case.

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The envious praise only that which they can surpass; that which surpasses them, they censure.—Colton.

Practice Management

The Handling of People in a Dental Practice

by CARL J. STARK, D.D.S., Cleveland, Ohio

(Condensed from *Jour. Ohio State D. Society*, August, 1942.)

IF and when any dentist ceases to thrill at the prospect of getting a new patient, his philosophy of thinking as well as his practice have passed the stage of venous congestion and are becoming gangrenous. A new patient to you is also a new dentist to the patient and in some instances his first dentist.

Whenever possible, compliment the patient upon the care of the mouth with the observation, too, that she has spent many hours in a dental chair, if such is the case. Never assume that neglect on her part or careless dentistry was responsible for the need of all this work. Above all, avoid introducing the names of other dentists into the issue for reasons known to all of you. While some people may delight in criticizing their former dentists because certain work was not up to expectation, people generally like to be given credit for having used good judgment in the selection of their dentist.

While pain is the chief obstacle in a dental office, do not overlook such irritations as dryness of a cotton roll, finger nail or mirror pressure, cracked lips, saliva ejector trauma, vertigo from vibration, muscular trismus, grinding and polishing dust, taste of medicaments as well as laboratory odours. A drop of lemon or pine oil in the spray bottle heater unit will go far to take care of the latter. Remember that you can let down the arm of the chair so that elderly or rheumatic patients can ease into the chair sideways. Such personal services as occasionally cleaning the patient's glasses (which, by

the way, he should be asked to wear when cleaning his own teeth), using mouth spray or wash before operating, relieving nose or throat irritation, using vaseline or cocoa-butter on dry lips, assisting with coats, protecting the patient's eyes against light, adjusting the room temperature to his comfort—all of these are effective in their place and most of them can be done easily and quickly by the assistant. The dentist's use of a mask when he has a cold, and administering first aid to minor hurts are both appreciated by a patient.

An evening's discussion could be devoted to the advisability of having a cup or glass of water within reach of the patient; the operative time lost may, of itself, justify the use of the rubber dam. We all have one or two patients who question the cleanliness of the cup or ask you to wash your hands if you have forgotten to do so after raising a window. These same people may carry a bottle of Lysol when they travel and wipe off door knobs and bath fixtures. They may also harbour a partial plate which is so slippery you can hardly hold it—a mecca for maggots or snails. While you cannot legislate cleanliness into their oral cavities, you still must not expect carelessness on your part to be excused.

If you are attending a patient in the chair and a telephone call is urgent enough for you to leave, do not only excuse yourself, but see that the patient is comfortable, and be sure to wash your hands before going back to the work in

the mouth. Remember that your first consideration is not the patient on the phone or the one in the reception room, but the one in the chair. If you do not wish to be interrupted during a bridge cementation or other operation, take the receiver off the base so that any incoming calls will get a busy signal instead of no answer.

The manner in which you dismiss your patient is just as important as the manner in which you greet him. In many instances it is the last few minutes which he spends in your office which he will remember most easily.

Someone in answering the question, "How do you treat a child patient?" answered that in most cases treat children like adults and adults like children. Too much has been written about getting down on your knees to be on the physical level with the child, or creating a nursery atmosphere, etc. It is not my intention to discredit the efforts of many of our specialists in the field of Orthodontia and Children's Dentistry to cater to their special needs. I do, however, wish to defend the many men in general practice who are daily meeting these problems without such facilities available as play rooms, or special equipment. Your dental office can be a house of magic to juvenile patients—the little fountain valves, the spray bottle, air cut-off, call button, and possibly motorized chair can be made as fascinating as the instrument panel of an automobile or various mechanized toys. Don't try to convince children that a dental drill is a harmless little buzzer when to them it feels like a lawn mower or a compressed air hammer. Don't ignore their questions and observations. The child has as much right as the adult to understand what is happening and what is going to happen to his teeth.

One of the cardinal sins of any dental

practice is to take our patients for granted after they have been coming to us for a period of years. This is an isolationist doctrine which is dangerous and frequently results in what appeared to be most unlikely—they have drifted away from you to someone else. Regardless of how sure you feel about your most loyal patients, you owe it to yourself as well as to them to occasionally treat them as though you are seeing them for the first time. In so doing you will find, very often, conditions needing attention which you both have tolerated for a long time. If recognition of the above fact does not come before or when a man's practice is at its peak it may come too late. Remember, too, that it is sometimes the patient you lose that makes for more success in your practice. It is the one you can never quite satisfy who does you the most harm—fortunately the number of these is limited.

Too many patients have been lost because they were kept waiting. Many times it is the unreasonableness of the patient, however there is never any excuse for keeping the first morning appointment waiting unless it be preceded by an emergency house or hospital call or emergency appointment in the office.

Every member of a health service profession should, very early in his career, identify himself with some worth-while civic or community project. He owes this, not only to his community and his patients, but to himself. The members of the dental profession constitute a great moral influence in their community and are frequently called upon to give recommendations to their friends and patients who are seeking employment or entrance to college. The literature in the reception room as well as the conversation in the office should reflect his college training and his consciousness of community responsibility.

The Forum

• A PRACTICAL CONSIDERATION OF THE SILICATES

by JOSEPH W. ROUSH, D.D.S., Oakland, Calif.
(Condensed from *Apollonian*, April, 1942)

WORKING EQUIPMENT

1. A thick glass slab (preferably with thermometer embedded).

2. Stellite or agate spatula. The spatula should not be flexible because of heavy pressure needed to make a thick mix.

3. Stainless steel packing instruments. A Hollenback double-end wax carver (Clev-dent) is excellent for packing the silicate into the cavity, and a stainless steel explorer to release trapped air.

4. Thin celluloid strips. Cocoa butter (semi-soft).

5. Ethereal varnish for cavity liner (Copalite).

6. Heavy varnish for covering filling before dismissal of the patient.

7. Very fine disks and polishing strips.

WORKING TECHNIQUE

1. Coat all previously placed silicates in the field of operation with varnish or cocoa butter for protection while working.

2. Place the celluloid strip in place before starting to mix and hold it over the empty cavity to see if it will adapt properly.

3. First, place the powder on the slab, then two drops of liquid. Two drops are better than three because it doesn't require as much spatulation as a larger mix. Replace the stopper on the liquid bottle as soon as possible to prevent unbalancing the liquid by evaporation or absorption of moisture.

4. Start mixing as soon as the liquid has been placed on the slab. Draw in a large amount of powder first, then very small successive amounts until proper consistency is attained. Make as thick as possible without sacrificing plasticity.

5. Keep the mix in a small puddle. This is obtained by holding the spatula at a slight angle to the slab. Mixing with the spatula flat on the slab will spread the mix. Scrape up the whole mass from time to time and fold over, clearing the spatula.

6. Gather the mix on the spatula and have your assistant hold it near the cavity so that no time will be lost in filling. Do not overfill the cavity.

7. In very small cavities if an explorer is inserted into the mass of filling clear to the floor of the cavity and is agitated, it will release trapped air. Take only a second for this.

8. Draw the strip and hold motionless until a test sample of excess is hard.

9. Place cocoa butter labially and lingually on the filling and draw interproximally by movement of the celluloid strip.

10. After several minutes, wipe off the cocoa butter with an end of cotton roll, and varnish, letting the varnish dry in the atmosphere undisturbed.

11. Polish at a subsequent sitting, using light touch and much cocoa butter as a lubricant.

12. When two adjacent cavities are to be filled, a strip is placed between the two teeth. First, one is filled; then the strip is drawn and held until the excess is hard. Cover with cocoa butter, leaving the strip in between the teeth. Next, make another mix and fill the second

cavity. Draw the strip away from the first filling and hold it over the second filling until it has set. Place cocoa butter on this filling. Later, wipe off the cocoa butter and varnish both fillings. Trying to fill two cavities from one mix is poor procedure. There will be too much excess and not enough time to pack each cavity well.

• RECOMMENDATIONS FOR THE CONTROL OF DENTAL CARIES

by THOMAS J. HILL, D.D.S., Cleveland, Ohio.
(Recommendations in paper in the *Jrl. of the Am. College of Dentists*, March, 1942)

INSOMUCH as there is ample evidence that the incidence of dental caries can be influenced in one manner or another, it is recommended that the American College of Dentists promote an educational program for both the dentists and the public, urging that all of the following methods be employed:

1. Such general reduction in the consumption of sugar as is consistent with wholly adequate diets. Emphasis should be placed on the reduction of sugar between meals, i.e., candies, gums with high sugar content and highly sweetened drinks. The severe restriction of sugar has been demonstrated to reduce acidophilus counts as well as caries activity. This has been a good experimental demonstration, but it is improbable that the general public will make a sufficiently drastic reduction of sugar to be effective.

2. Promoting wholly adequate diets—because of the influence on tooth formation as well as their influence on general body metabolism, including the influence on dental caries.

3. The medicinal treatment of teeth and, in particular, the use of silver nitrate in incipient caries.

4. Prophylaxis in its broadest sense as outlined by a previous speaker.

It is further recommended that the American College of Dentists support and, through its Committee on Research, financially aid the investigation of:

1. Hereditary influences on dental caries. The College is at present aiding the work of two investigators in this field. Continuation of this aid is desirable.

2. A re-study of the oral bacterial flora with particular attention to the nutritional requirements of the aciduric microorganisms of the mouth. The striking need for such a study is apparent because at the last meeting of the International Association for Dental Research, of the 110 papers presented, only two dealt primarily with the bacteriology of dental caries.

The dental profession in order to fulfil a great public service in caries prevention, is obligated to use any or all of these methods to control the ravages of this disease.

• DUODENAL ULCER

by PROFESSOR JOHN A. RYLE, M.D.
(Excerpt from *Guy's Hospital Gazette*, Aug. 22, 1942)

TWENTY years ago we were looking for "a cause" of duodenal ulcer. The bacterial hypothesis again, with infection traced to the teeth, was most in vogue. *Dental sepsis is now no longer given a place of importance.* By studying the natural history of the disease we have become impressed with the influence of age, sex, heredity, physical type and temperament on the one hand, and of emotional and occupational stress and tobacco on the other. Diathesis and environment, through sustained stimulation producing physiological disturbances of similar type, both have significant influence. The story is not complete, but it may even be that we have here an example of a clear-cut organic disease without a specific agent.

"Who sees his own mistakes has no time to consider those of others."—Persian Proverb.

• FOOD FOR THOUGHT

No one would ever accuse Malcolm Bingay of being a radical. The following thoughts are quoted from his "Good Morning" column in the Detroit Free Press for March 19, 1942. The whole discussion is entitled "Growing Up".

In line with Mr. Bingay's thoughts it may be observed, even though it be a matter of chagrin, that the Osteopathic Physicians of California have already seen fit to require periodic qualifying examinations as evidence that they be permitted to continue serving the public.—W. R. D.

"I CAN remember back, not long ago, when I was supposed to be a very wise person because of what I had read and heard, telling people that the Russian Idea was doomed to defeat. Yet here we see Russia as the one hope of democracy. And more!

"We find from our scientific friends that in this supposedly dark continent of ignorance, there is coming forth the best medical papers known to the present day world. And we find that in engineering those very backward people are giving lessons to our American engineers.

"It makes me very much ashamed of what I thought was inside information to learn that Russia is so far ahead of American medicine that we look like the children we really are when it comes to an understanding of preventive medicine.

"I am now told by the best medical advice that we have at hand that there is a very simple plan in Russia to protect the health of the people. It consists of this: Every doctor must submit himself to an examination every year! Think of that in the United States!

"Here a doctor does not pass any test after he has once received his medical diploma. If he were graduated 20 years ago he does not have to know any more than he did on the day he was graduated. He need know nothing about the famed 'sulfa' family of medicine.

"He does not have to know anything about the researches of the whole world—including both Germany and Japan. He

can settle down into a nice comfortable neighbourhood practice and be accepted as a 'healer' when the parade has passed him by almost a generation. But, not in Russia! There he must submit himself to an examination that is as sharp as when he finished that fourth year at school.

"In Russia they refuse to believe that a doctor learns all there is to know about medicine once he has been allowed to hang out his shingle. I would suggest to my fellows of the Wayne County Medical Society that here is an idea. Advocate a state law making it mandatory for all doctors to submit themselves to examination every year. And, if they have failed to keep abreast of developments in their science, let them be barred from practice until they have reached that point of knowledge.

"I only mention medicine as one example of what is wrong with our viewpoint."—*Jrl., Mich. S. D. Soc., April, 1942.*

• HIGHER LEVELS OF INTEGRATION

by DR. R. W. GERARD, Professor of Physiology, University of Chicago.

(Excerpt from *Science Magazine*, March 27, 1942.)

SOCIETY is in bitter need of better mechanisms for selecting its leaders, the individuals who will play the dominant role in the social gradient, as the brain and receptor cells exercise physiological leadership in our own bodies. When proper leaders—men qualified by talent and training for the duties demanded in the position of social leadership—can be selected by devices which are more dependable and objective than are the accidents of family, rhetoric, ambition and other circumstances which today frequently toss undesirable individuals to the apex of the power pyramid, I believe that the most serious of the world's afflictions will have been conquered.

• **REMOVAL OF STAINS FROM MOTTLED ENAMEL TEETH**

by CRAWFORD A. McMURRAY, D.D.S., Chairman of the Committee on Mottled Enamel of The Texas State Dental Society.

(Excerpt from the *Texas Dental Journal*, September, 1941.)

THE agent used for the chemical removal of these stains is 18 per cent Hydrochloric Acid applied in the following manner. After the teeth have been given a thorough prophylaxis, a cotton roll is placed under the upper lip to hold the lip away from the teeth and to keep the area dry. The acid is applied with a rather large orange-wood stick, the point of which has been flattened. As the acid is applied it is continually rubbed over the labial surface of the tooth and allowed to stay for two minutes. At the

end of the two minutes the area is flooded with a solution of Sodium Bicarbonate. This is applied with a cotton roll that has been soaked in the solution. The patient is instructed to wash the mouth thoroughly with water and the area inspected. It may be necessary to repeat the procedure three or four times before the desired result is obtained. Before the application of the acid, the labial surfaces of the teeth to be treated are polished to a smooth surface free from pits or other structural defects. The results will be gratifying to both patient and operator. There will be no sensitiveness to the tooth either during or after the operation. The remaining tooth structure is not injured and will give the years of wear that could be expected of the tooth before treatment.

OFF THE RECORD

By Ed Reed



"—and when you administer the gas don't say, 'Fill 'er up?'"

Today the sum spent by the British Government each year on medical research is no more than the cost of killing thirteen men in modern warfare.—Olar Stapledon in Dental Record.



PRINCE EDWARD ISLAND



Editor — M. H. GARVIN, Winnipeg

SASKATCHEWAN



A S S O C I A T E E D I T O R S

D. T. Wayne, Charlottetown

NOVA SCOTIA



S. G. Ritchie, Halifax

QUEBEC



E. M. Laurin, Montreal

ONTARIO



T. R. Marshall, Toronto

F. C. Harwood, Moose Jaw

ALBERTA



John Clay, Calgary

NEW BRUNSWICK



W. C. Carruthers, Saint John

MANITOBA



J. F. Morrison, Winnipeg

BRITISH COLUMBIA



H. M. Cline, Vancouver

Geriatrics

While Geriatrics is the branch of medical science dealing with the care of the aged, we must remember that in these days many people are old at fifty. To prevent this early aging, to carry more people on, in health and happiness, to four score years and ten and even longer is a goal worth attaining. To apply even the present knowledge patients must be under observation long before they reach the apparent aging stage.

Musser in "The Heart that is Aging" says: "The geriatrician will become the conservator of the health of the ancient; he will have learned to recognize the early signs and expressions of disease; he will make periodic diagnostic check-ups of his clientele; he will advise, instruct and guide in the modes of living, in proper hygiene, in adequate feeding and in many other details which will tend to minimize or obliterate the conditions which might and will induce disease."

We can all hope for the rapid development of this study of geriatrics. How great are the advantages to be derived from securing physiological efficiency rather than from those derived from repair after a breakdown in health!

Dublin in "Longevity in Retrospect and in Prospect" states that in 1850, 2.6 per cent of the population obtained the age of 65. In 1930 the percentage

was approximately 6. It has been estimated that by 1980 at least 15 per cent of the total number of people of this country will have reached or passed the age of 65. Dublin further states that a child at birth will have 45 chances in 100 of dying of cardiovascular renal disease; a man at the age of 30 will have 52 chances and in the case of a man of 60 the ratio is as 6 to 10.

Here we have the problem of not only putting more years into life but of putting more life into years and to accomplish this dentistry must surely play its part. The dentist of the future must work with the diagnostician, the pathologist, the nutritionist and other specialists in attacking the diseases common to aging, in fact the dentist must become so well informed and observant that he will be able to interpret the many conditions of pathosis in the mouth in terms of incipient systemic disease. As knowledge increases in this field he will be able to direct many patients to consult their physicians long before the general symptoms of disease have become so apparent as to be self-evident to the patient himself.

As a result of careful observation he can, in certain cases, give some good general advice. In these strenuous days so many patients are high-strung and off balance, a condition easily discernible as dental treatment proceeds. The dentist can urge these people to accept the problems of life with greater poise. Pearl studied the social history of 2000 nonagenarians and octogenarians; some of these subjects used alcohol, some were abstainers; some smoked, some did not; some ate to excess, others were restrained in their food intake. The only characteristic that Pearl found common to all of this group was a placid and calm disposition. These old folks took things, as they came along, easily in their stride; they did not let the problems of life and living disturb them unduly. The dentist has opportunities to advise patients with regard to many of life's problems long before a serious break in health comes and the advice of a physician is sought.

Worry and responsibility undoubtedly accounts for many of these systemic upsets, including many conditions of mouth pathosis. Wissler in "Human Cultural Levels" writes that in the Incan empire of pre-Columbian Peru that, after 50, the male stopped paying taxes and had the privilege of spending his declining years in rest and slumber. No doubt it would be helpful to many, in these days, who are approaching old age if they could be excused from paying taxes. However, this is one calamity for which the writer has no solution.

For a dentist to be helpful and have his advice accepted he must be an example of his teachings. How can he urge the necessity for regular prophylaxis when at one glance the patient can see that the dentist requires this service? How can the dentist dwell upon the advantages of inserting a bridge in the patient's mouth when it is very apparent that the bicuspid teeth of the dentist are missing? How can the dentist impress the patient with the importance of a balanced diet when he does not follow any such rules?

Our examination of the patient should not be of the life insurance variety

which is largely negative. Because we may not find any evidence of active caries does not mean that our examination should stop there. We should look for trends or tendencies to disease and advise accordingly. Particularly does the man of fifty have a right to expect that we will give him advice that will assist in prolonging his usefulness and his happiness, if not life itself; and make him more fit for life's duties and responsibilities. To a considerable extent we, as dentists, should carry on research in the field of geriatrics.

BOOK REVIEWS

Traumatic Surgery of the Jaws, Including First-Aid Treatment by Kurt H. Thoma, D.M.D., Professor of Oral Surgery and Brakett Professor of Oral Pathology, Harvard University; Oral Surgeon to Brooks Hospital, Consulting Oral Surgeon to New England Baptist Hospital; Visiting Oral Surgeon, Beth Israel Hospital; Surgeon, Dental Department, and Consultant to Tumour Clinic, Boston Dispensary. 315 pages with 282 illustrations. Price—\$7.00. St. Louis, Mo. The C.V. Mosby Company—1942. Canadian Agents: McAinsh & Co. Limited, Toronto, Ontario.

As the title of this book indicates, it deals with injuries to the face and jaws. These conditions are quite common, particularly since the advent of the motor car and the increase in automobile accidents. Under war conditions these injuries will become more numerous and at the present time, when war is made upon the civilian population as well as the military forces, a dentist may be called to treat injuries of this nature at any time even if in the past he has had no experience with conditions of this nature.

In view of these facts, this text-book is particularly timely. Every dentist should be prepared to give at least first-aid treatment in all jaw casualties and many should be able to render any service indicated.

As it might be surmised, the author devotes the major portion of his text-book to the treatment of fractures of the mandible and maxilla. Many actual cases are presented and the treatment explained with a description of the appliance used. Some of these cases, the result of war injuries, are as recent as 1942. Other chapters deal with first-aid treatment, facial and oral wounds and injuries to the teeth and condyle.

The illustrations are numerous and excellent and obviate the necessity of lengthy explanations in the text. This book will make a valuable addition to the library of any dentist or dental student. For the dental surgeon or dental officer who may be called upon to treat injuries of the face and jaws it is particularly recommended.

S. A. MOORE.

Synopsis of Full and Partial Dentures, by Roger G. Miller, D.D.S., Lieutenant-Colonel, Dental Corps, U.S. Army; Officer in Charge of Prosthetic Department Army Dental School, Army Medical Centre, Washington, D.C. Cloth Bound. 221 pages. 107 illustrations. Published by C. V. Mosby Co., St. Louis, Mo. Canadian Agents: McAinsh & Co., Ltd., Toronto. Price \$3.50.

This book is just what its title implies, a synopsis of the construction of full and partial dentures. It is concise and comprehensive and no dentist interested in prosthetic restorations can fail to benefit by reading it. Because it is a synopsis the author does not describe every method but does give a good practical method for cases requiring these restorations. Chapters include those on, examination and mouth preparation, impressions full and partial, vertical dimension, centric relation, selection of teeth, immediate dentures and perfecting the occlusion and instructions to the patient. The author is to be congratulated on the thorough way in which he has presented this subject in one small volume. The book itself is exceptionally well printed and prepared.

Kenneth M. Johnson.

CORRESPONDENCE

Dental Headquarters, England.
To Dr. Stephen A. Moore, London, Canada:

In Lt-Col. Trelford's absence, I am answering your letter of Aug. 8/42.

A survey of the dental officers has been made and it has been found that there is a certain amount of duplication of the Canadian Dental Journal. The matter was discussed at a Company Commanders' meeting and they agreed to be responsible for the circulation if

a limited number was sent to each Company.

In view of the paper shortage and the strain that is being placed on shipping, it is suggested that sixty copies be forwarded to this Headquarters for distribution. This will provide a limited number for each Company and will also provide for Hospitals and Forestry Corps.

Signed:—L. V. Janes, Lt-Col.
D.D.D.S. Branch C.M.H.Q.

DENTAL CORPS NEWS

M.D. No. 12, Headquarters Regina

On October 16, Lieutenant-Colonel G. L. Cameron, D.S.O., Deputy Director of Dental Service, paid a visit of inspection to No. 32 Coy. at Regina.

While here he spoke at a luncheon meeting to the Dental Officers of No. 32 Coy. and No. 40 Coy. located at this point, with Major A. G. Smith, D.D.O., presiding.

After speaking at some length on the activities of the Corps at home and overseas, Lieutenant-Colonel Cameron brought out that he not only would like to see a high

standard of work maintained, but that he considered the volume might well be increased.

The function of the Dental Corps was to do its utmost to make men dentally fit and there was no place in it for slackers or for men who were not prepared to give their best.

Questions pertaining to the Unit were discussed and problems cleared up in a more satisfactory way than could have been accomplished by lengthy correspondence.

Altogether it was distinctly felt that a real benefit will accrue from this visit and that a definite stimulus was given to the best working of the Corps.

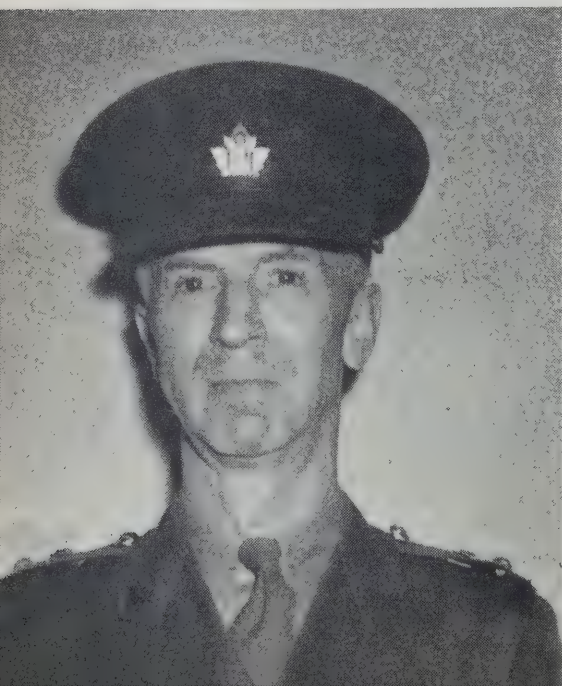
Lieut.-Col. N. S. Bailey

Lieut.-Col. Norman S. Bailey was born in Portage la Prairie, Manitoba. He was graduated from the R.C.D.S., Toronto, Ontario, in 1914, and practised dentistry in Portage la Prairie.

In 1915, he enlisted in the C.D.C. and saw four years service in Canada, England, and France. Joining the C.D.C. again in October 1939 as a Captain, he was soon appointed C.D.O. of No. 4 Training Command, R.C.A.F., Regina, having previously been promoted to the rank of Major.

In August, 1941, he was transferred to No. 2 Training Command, R.C.A.F., Winnipeg, in the same capacity, where he has since been stationed. He was President of the Manitoba Dental Association for two years prior to enlistment. His wife and three children still reside in Portage la Prairie.

An ardent golfer and hunter, he has even been experimenting in Isaac Walton's pastimes recently.



Lieut.-Colonel C. W. Steele

It has been announced that Major C. W. Steele has been promoted to Lieutenant-Colonel. He is Command Dental Officer of the Western Air Command, Victoria, B.C.

He was graduated from the R.C.D.S. of Ontario in 1921.

In 1934 he was commissioned in the Weyburn Regiment of Saskatchewan as Paymaster. In September, 1939, he joined the C.A.S.F. as Paymaster, South Saskatchewan Regiment, when the unit was mobilized for active service. He was transferred to No. 12 Coy., Canadian Dental Corps, October, 1939. He was appointed Adjutant, April, 1940, and in June became Command Dental Officer, No. 2 Training Command, R.C.A.F. with Headquarters in Winnipeg, Manitoba. Later he was moved to Victoria as Command Dental Officer of the Western Air Command.



2nd Lieut. W. Wood

Second Lieutenant W. Wood, who was recently commissioned in the Canadian Dental Corps, has been transferred from No. 25 Company, C.D.C. to No. 9 Company at Debert, N.S.

Second Lieut. Wood was born in Scotland but came to Canada at an early age. He was educated in Toronto, and operated his own dental laboratory in that city for nine years. He enlisted in the Canadian Dental Corps in July, 1940, as a dental technician with the rank of Private. In December, 1940, he was promoted to Sergeant and posted to Quebec City where he was in charge of Dental Laboratories. In January, 1941, he was promoted to the rank of Warrant Officer, class II. He received his commission when he completed his course at the Officers Training Centre at Brockville this year.





Lieut.-Colonel A. Gregor Smith

Lieutenant-Colonel A. Gregor Smith, recently promoted from the rank of Major has been D.D.O., in M.D. No. 12 since March 20, 1940.

He was born in Peel County, Ontario, He was practising in Regina, Saskatchewan at the outbreak of the First Great War, when he was appointed Captain in the Canadian Army Dental Corps in 1916, serving until 1920.

In September, 1939, he again received an appointment in his present Company, and when Lieutenant-Colonel G. L. Cameron, D.S.O., was called to Ottawa, Lieutenant-Colonel Smith became District Dental Officer.

NEWS FROM THE PROVINCES

SASKATCHEWAN:

Moose Jaw Dental Society

The monthly meeting of the Moose Jaw Dental Society was held on October 15 with the President Dr. F. C. Harwood in the chair. At the previous meeting the members of the Society decided to comply with the request of the School Board to undertake the work for school children ordinarily done by the school dentist, Captain A. E. Chegwin now in the Canadian Dental Corps. At the October meeting details were discussed regarding the School Clinic, and a committee of the Society will endeavour to divide the work as equally as possible among the members.

Dr. A. Fraser Muirhead was again appointed by the Society to lecture on Oral Hygiene to the nurses-in-training of the Moose Jaw General and Sisters of Providence Hospitals.

At this meeting the Society had the pleasure of entertaining a former member, Captain A. Duff Leask, now in the C.D.C. who was home on a short leave.

The annual election of Officers of the Society for the coming year was held at this meeting and resulted in the election of Dr. J. E. Rundle as President, Dr. A. M. Lowery

as Vice-President, and Dr. R. E. Wyatt as Secretary-Treasurer.

Regina Dental Society

The Regina Dental Society held its monthly meeting October 20 at the Drake Hotel. Following the regular business the members were shown through the Regina Clinic of the Canadian Dental Corps. Major A. G. Smith, District Dental Officer, M.D. 12, gave a short talk on the organization and work of the Canadian Dental Corps and then introduced Major R. S. Rose of No. 32 Company, C.D.C., who presented a clinic on amalgam restorations. A patient was present on whom Major Rose demonstrated the placing of an amalgam filling. Models were also introduced showing different cavity preparations and a general discussion followed.

At the meeting tentative arrangements were made to form a joint study club composed of the members of the Society and the officers of the C.D.C. for the coming winter months. Dr. DeWitt was appointed to get the study club into operation and to present a preliminary program at the next regular meeting. Captain Donald MacFarlane presided.

MANITOBA:

Winnipeg Dental Society

On October 29 in the Club Rooms of the Medical Arts Bldg., the Winnipeg Dental Society had a record attendance at dinner and others came in later to listen to a first hand presentation of an illustrated address which would have been one of the highlights at the annual convention of the American Dental Association in August at Boston if wartime restrictions of travel had not prevented the convention being held. The subject presented was "Lower Dentures". The lantern slides had been prepared from live and wet specimens of the mandible showing the muscle attachments functioning in the various positions of mastication, deglutition and speech. The live specimen slides showed a series of positions of tiny metal beads which had been sutured to the stylo-glossus muscle area of the essayist. We permit you only one guess as to the identity of the essayist. Dr. Howard James Merkeley of course is the only man we have out here who would go to all that trouble to prove his case. The success which Dr. Merkeley has in placing lower dentures which function efficiently without discomfort to the wearer proves that he knows whereof he speaks when talking about lower dentures.

Manitoba Dental Association

The annual printed list of the dentists registered for the current year shows a total membership of 257. Sixty-seven of these are on active service with the Canadian troops.

Since the first call for dentists to enlist with the Canadian Dental Corps 70 have joined from our Association. Seventeen more volunteered but were medically unfit. There are still about 45 dentists in the Province, most of them in Winnipeg, who are under 45 years of age who are eligible for military service and have not offered their services and in the meanwhile the vacancies are being filled by volunteers from across the line.

Dental Nurses and Assistants

The Winnipeg Dental Nurses' and Assistants' Association met on November 2, in the St. Regis Hotel. The President, Miss Jean Gordon, was in the chair.

An enjoyable half hour was spent listening to Dr. Manly Bowles, guest speaker of the evening. His subject was "Children in the Dental Office."

A business meeting followed. A motion was carried to the effect that \$10.00 would be used to buy gifts for the soldiers at Christmas. A letter from the McKinnon Guild was read, thanking the Association for some tinfoil.

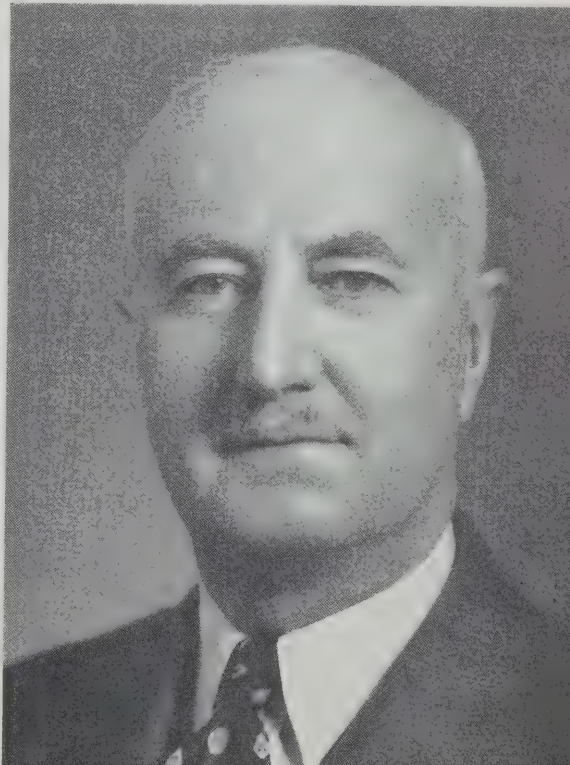
ONTARIO:

Dental Public Health in Faculty of Dentistry, University of Toronto

Dean Arnold Mason has announced the establishment of a department of Dental Public Health in this Faculty. Harry S. Thomson, D.M.D., has been appointed as director with the rank of Associate in Dentistry and Edmund A. Grant, D.D.S., also an Associate in Dentistry, will be assistant.

Dr. Thomson and Dr. Grant, Field Secretary and Executive Secretary respectively, of the Canadian Dental Hygiene Council, are well known for their team work in Dental Public Health throughout Canada. Dr. Grant, too, has had considerable experience

HARRY S. THOMSON, D.M.D.





DR. W. L. DURANT
Brockville, Ont.

in an administrative capacity as Director of Dental Services in the Department of Health, City of Toronto, for many years.

This new department aims to give the student a general conception of the relation and the responsibility of the dentist in the public health field.

The course will consist of a series of lectures on dental health education of the public, public health dentistry and on the organization, administration and conduct of dental public health services.

There is a pressing need for trained dental personnel in public health services. Dental health is now a well organized function of almost every health department. Dentists must be trained to take their place as public health workers, qualified to give an understanding of public facts and findings relative to dental public health in its broadest sense and to co-relate dental and social welfare.

Dental health education and public health dentistry are becoming increasingly constructive health factors in Dominion, Provincial and local health activities.

In directing this new department Dr. Thomson brings a wealth of experience, the respect and confidence of public health departments in

every province and the goodwill of all his Canadian colleagues.

Dean Mason is to be commended for his foresight in sensing the need for increased instruction in dental public health and for his initiative in providing facilities and staff.

Eastern Ontario Dental Association

The Eastern Ontario Dental Association Convention was a splendid meeting. It was arranged efficiently and conducted in a friendly informal manner enjoyable to all present. President Lorne Durant and Secretary, D. L. MacKerracher, together with other officers were constantly taking charge of the details that made everything run smoothly and to these hardworking men goes the thanks of all members and visitors present.

The guest essayists were Dr. Wm. Chalmers, Toronto and Dr. W. N. Miller of Flint, Michigan. Dr. Chalmers gave a splendid illustrated discussion and clinic on removing teeth, demonstrating an original method. His efforts were greatly appreciated. Dr. Miller discussed dental practice from the standpoint of economics and he, too, had a very attentive audience on two appearances.

The Canadian Dental Corps was represented by Lt. Col. Dwight Coons from Headquarters Staff, Ottawa and Lt. Col. Ira Hamilton, District Dental Officer of M.D. No. 2, who brought with him to the convention luncheon, Col. J. Gregg, V.C., M.C., Officer in Command of Brockville Officers Training School.

Other guests of the meeting were President Arthur Walsh of the Canadian Dental Association, President Lee Honey of the Ontario Dental Association, Dr. A. D. Angus, President Montreal Dental Club, Dean Arnold Mason of the Faculty of Dentistry, University of Toronto, Dr. Heber Hodgins, Director of Dental Services of the Provincial Department of Health, Dr. D. W. Gullett of the Royal College of Dental Surgeons of Ontario and Dr. H. S. Thomson of the Canadian Dental Hygiene Council.

The Public Dental Health Committee of the Ontario Dental Association were invited to send two representatives to the meeting. Drs. R. P. Lowery and T. R. Marshall attended and presented addresses on Dental Public Health. They also addressed 500 secondary school students and 400 primary school pupils, grades

VI, VII and VIII, in the Collegiate auditorium and projected suitable sound pictures in colour to emphasize their dental health message.

Quite a number of ladies attended the convention and they were entertained by the Brockville members' wives. Dr. Couture projected two very interesting sound movies following the convention dinner. After a busy day the members were in splendid mood to sit quietly and smoke their pipes and enjoy informally the programme presented by Dr. Couture.

New officers of the Association are:—

President—Dr. A. B. Morrow, Ottawa.

Vice President—Dr. D. L. MacKerracher, Arnprior.

Secretary Treasurer—Dr. A. A. Cameron, Ottawa.

Advisory Council—Doctors M. Purcell, Pembroke; L. Martin, Ottawa; A. Couture, Ottawa; W. L. Durant, Brockville; H. A. Stewart, Kingston; R. Currie, Ottawa; K. McDowell, Renfrew; and W. N. Stevenson, Avonmore.

GOLF

Winners of the golf game were:—

Low gross—Dr. M. J. Mulvihill, Pembroke; low net—Dr. F. Price, Ottawa; low net 1st 9—Dr. Roy McDougal, Ottawa; low net 2nd 9—Dr. D. L. MacKerracher, Arnprior.

Masons Honour Dr. G. Kennedy

A unique Masonic ceremony took place in St. Thomas on November 5 when dentists who are members of the Order gathered from various parts of Ontario to pay honour to Dr. George T. Kennedy, Assistant Director of Ceremonies in the Grand Lodge of Ontario and a member of Talbot Lodge No. 44 for the last forty-four years. Among the visitors who made up a dental team exemplifying the second degree and who spoke later was Mayor Fred J. Conboy of Toronto. Dr. Kennedy was presented with Grand Lodge regalia by Dr. M. B. Ryckman.

Toronto Ladies

The November luncheon of the Ladies' Auxiliary to the Academy of Dentistry and Canadian Dental Corps M.D. 2, was held on November 19, at Diana Sweets. This meeting was convened by the West Group,

with Mrs. K. R. Harris, President, in the chair. Mrs. L. R. Davison introduced the speaker, Mrs. H. J. Mullett, wife of Dr. Harrison J. Mullett, dental missionary, at present interned in Hong Kong, who spoke on "The Women of China". Mrs. E. A. Grant thanked the speaker and presented her with flowers.

Mrs. J. L. Dickson reported 229 Christmas boxes had been sent overseas and to Newfoundland to officers and men from M.D. 2. Reports were given by Mrs. A. J. McDonagh, wool convener, and Mrs. G. W. Grieve, sewing convener, on the work being done. Mrs. E. T. Guest, reported a publicity campaign in progress to further the work of the scrap gold project.

Dental Nurses' Alumnae

The November meeting of the Dental Nurses' Alumnae Association was held at the Faculty of Dentistry Building with the President, Miss Anna Lindsay, presiding.

It was announced that the Winter Clinic was open to nurses of the Alumnae including last year's class and the nurses in training. The members were asked to take part by putting on clinics.

The social convener, Miss Eleanor Mason, announced that final arrangements for the annual dance had been made and would take place on November 16 at the King Edward Hotel.

Mrs. R. Howlett was appointed Music Convener for the remainder of the Alumnae year.

The guest speaker of the evening was Dr. S. J. Lesco, head of the Orthodontia Department of the Faculty of Dentistry. Dr. Lesco gave an interesting address on "Orthodontia In Relation To General Health." The speaker was introduced by Mrs. R. Howlett and thanked by Miss Gertrude Whitehead.

At a special meeting of the Alumnae in October at the Faculty of Dentistry Building Lt. Col. D. R. Ferguson, District Dental Officer, M.D. No. 2, explained about the C.W.A.C.

Miriam Jennings, Publicity Convener.

Special Meeting of Dental Nurses' Alumnae

A special meeting of the Dental Nurses' Alumnae Association of Canada was held on October 20, in the Dental Building, University

of Toronto, when the Toronto dental assistants were their guests. Lieut.-Col. D. J. Ferguson, District Dental Officer of M.D. No. 2 gave an address on "The Requirements for Enlistment in the Canadian Women's Army Corps and their Duties while Attached to the Canadian Dental Corps".

The following is a summary of requirements as outlined for enlistment in the C.W.A.C.—

Qualifications

To be eligible for enlistment, an applicant must:—

- (a) Be between the ages of 18 and 45.
- (b) Be a British subject.
- (c) Be medically fit, not lower than category "B".
- (d) Have completed Grade VIII or hold a certificate of equivalent educational standing.
- (e) Have no dependents. These include children under the ages of 16 for boys and 17 for girls, who are classed as dependent on the mother for care and general welfare.

Conditions of Service

Recruits must undertake to serve:—

- (a) In Canada or beyond Canada or overseas.
- (b) For the duration of the present war and for a period of twelve months thereafter, if required.

Pay and Allowances

- (a) The rates of pay for a private are ninety cents a day for the first three months, then ninety-five cents a day.
- (b) Subsistence allowance of \$1.00 a day is given where personnel are living out of barracks.
- (c) Uniform is issued free, and an allowance of twenty cents a day is given until a recruit receives it.
- (d) \$15.00 is given on enlistment for the purchase of underwear and necessities and an additional allowance of \$1.00 per month paid quarterly is also given for renewal purposes.

Employment

Members of the C.W.A.C. are employed to replace soldiers in many duties; for example—clerks, typists, stenographers, bookkeepers, draughtsmen, telephone operators, laboratory and x-ray technicians, dental nurses, drivers

and driver mechanics, cooks, waitresses, canteen helpers, storewomen, librarians, messengers.

General

The Canadian Women's Army Corps forms part of the Defence Forces of Canada on Active Service, and its members are therefore eligible for:—

- (a) Clothing, food and lodging.
- (b) Medical and dental care and hospitalization.
- (c) Disability pensions.
- (d) Rehabilitation grant and a clothing allowance upon discharge, with certain restrictions.

Lieut.-Col. Ferguson further enlarged on the duties and requirements for a member of the C.W.A.C. to act as dental chair assistant.

Duties

- (1) The human dentition, anatomy and physiology.
- (2) Hygiene, oral and general.
- (3) Documentation—records, returns, incidents.
- (4) Knowledge and care of equipment, including x-ray and general anaesthesia apparatus; supplies, instruments, drugs and materials.
- (5) Contents and purpose of various kits.
- (6) Preparation of supplies; filling and impression materials, dressings, etc., a knowledge of weights and measures.
- (7) Radiography—the exposure and processing of dental films.
- (8) General anaesthesia.
- (9) Clinical technique, cleanliness and care of person and clinic. Assistance in the clinic. Satisfactory clinical service of a candidate should be accepted in lieu of a practical test.
- (10) Clinic administration, supervision, returns and records, stores and indenting.
- (11) Organization and administration of the Dental Service.

Lieut. Bernice Boyd of Davenport Barracks described the busy and interesting life of a dental assistant in the C.W.A.C. Lieut. Boyd with her charming personality was a fine example of what should be expected in a dental assistant.

This is submitted to the dental nurses and assistants throughout Canada who are con-

templating joining the Canadian Women's Army Corps.

Ontario Dental Nurses' and Assistants' Affiliated Associations

Patriotic Donators and Knitters Club

As we enter upon our fourth year of war services, we value this opportunity to express our gratitude to the Dental Trade Association, for their very generous annual cheque in support of our war work, particularly do we value their kind letter of good wishes. We also gratefully acknowledge cash donations from Sudbury, Brantford and Toronto Associations, Helen Dosman, Mildmay, Alice Hill, Marion Edwards, Ilean C. Bruce and Tomye Turner of Toronto.

Our 14th consignment of knitted comforts is now ready for shipment overseas, and this month we shipped 15 large boxes of Canadian foods (unobtainable in England today) to the seven Dental Corps Companies (Overseas), to the London Association of Canadian Ex-Servicemen and to our adopted R.C.A.F. Station in North England.

The mail bag during October received 42 letters and cards from soldiers overseas.

LETA B. BLABER, Provincial War Convener.

Ottawa Affiliated Association

The first fall meeting of Ottawa A.A. was held October 5, in the office of Dr. W. H. Pritchard. Twenty-one girls were present.

Dr. Pritchard, our guest speaker, gave a very interesting and helpful discussion on "Dentistry for Children."

At the close of the meeting Maude Durrell and Edith Bracey served refreshments.

OLIVE CUMMING, Sec.

Toronto Affiliated Association

The November meeting of Toronto A.A. was held in the Royal York Hotel, November 2, with the President, Doris Gregory, presiding.

Miss Leta Blaber, War Convener, announced that a display of the war work completed by the P.D.K.C. would be exhibited at the Winter Clinic Meeting.

The guest speaker of the evening was Dr. H. A. Dixon, his subject "Skin and Its Care" was illustrated with coloured slides. We found Dr. Dixon's subject most interesting.

MARJORIE HOLMES, Sec.

Hamilton Affiliated Association

The first fall meeting of Hamilton A.A. twenty-seven members answered the roll call. Helen A. Smith and Margaret Thomson were appointed Hostesses and will be on hand at all meetings to greet the guests and members. Each member was pledged to pay an additional fifty cents per year and this money is to be forwarded to the Editor, Fern L. Cook, as our contribution towards the financing of the much valued Bulletin.

Several requested wool be obtained from the P.D.K.C. so that they could aid our soldiers by knitting for them.

Margaret Dickson, librarian, gave a talk on the books in our library and met with much enthusiasm from our members.

The President, Jean Dalglish, gave us the O.D.N. and A.A.A. Convention dates, also mentioning the Convention Theme, Poster subject, and Special Contest.

CATHERINE SHEPPARD, Sec.

London Affiliated Association

The November meeting was held at the office of Dr. Gillies, 425 Richmond St., Miss Dorothy Innes presiding.

There was a record attendance including five new members. Eleanor Beaton and Helen Hughes from Woodstock, Mrs. Goodhand and Dorothy Haskett from London, Dorothy Clark from St. Thomas.

The results of our sewing bee were most gratifying. The layettes are now complete and we are sending them to Leta Blaber as part of our contribution to the P.D.K.C. war work.

Nickel belts have been given each member and we are looking forward to the "Jinkle Jangle" of nickels when the belts are turned in at the January meeting. We are keeping up the old tradition and having a Rummage Sale on November 16.

A very interesting demonstration on tin-foiling was given by Isobel Scott. At the close of the meeting refreshments were served by the hostess, Isobel Scott.

MARGARET MCAULIFFE, Sec.

Brantford and District Affiliated Association

The first fall meeting took the form of a Theatre Party.

The second meeting was held October 20, in

the Y.M.C.A. with our president, Miss Alta Simon, presiding.

Mr. A. Hurley entertained with several lively vocal selections. We greatly enjoyed Mr. A. E. Cuthbertson's coloured pictures and accompanying explanations of his travels in various parts of Canada.

ARIEL REILLY, Sec.

Kitchener Affiliated Association

The Kitchener A.A. held their November meeting in the Gaudies Maple Club. We had as our guest Miss Gillis of Cape Breton (C.W.A.C.) who is training at the No. 3 Training School in Kitchener. Miss Gillis was employed as a dental assistant in New York and on completion of her training here, expects to be stationed at Halifax.

After the business meeting Dr. D. A. Messersmith gave a very interesting talk on subjects ranging from good posture to the sterilization of handpieces and the value of illustrative models.

We plan to hold a rummage sale about December 1. Ruth Janke invited the girls to her home to help pack boxes for overseas.

Margaret Brown of Acton was the winner of War Savings Stamp that we raffled at each meeting.

Yvonne Jacques of Preston told us she will be assisting Dr. D. P. Sutton, formerly of Drayton, when he opens his new office in Preston. Yvonne's former employer Dr. Peterson is now in the Canadian Dental Corps. Helen Law (A.W.I.) a former member of our Association is now stationed at Fingal having enlisted in the Dental Corps some months ago.

LARRY OLHEISER, Sec.

Sarnia Affiliated Association

The first meeting of the fall season was held at the office of Dr. E. A. Story, Aileen Palmer, Vice-president, presiding.

All business to complete the previous year was taken care of and the election of officers took place with the following results:

President, Marjorie Crees; Vice President, Kay Guerns; Sec'y.-Treasurer, June Delderfield; War Convener, Vera D. Kutchaway. It was decided because of the distance our members have to travel we would hold our meetings every two months. Refreshments were served by our hostess and our meeting was brought to a close. JUNE DELDERFIELD, Sec.

Windsor Affiliated Association

The November meeting was held in the Canada Building with Winnifred Grier presiding.

The business of the meeting proceeded and Janet Gunn was appointed Membership Convener. Our next meeting will be in the form of a Christmas party. The guest speaker was Dr. M. S. DeVilliers of Detroit who spoke on "The Art of Dealing with People". This was a very interesting subject.

DOROTHY BAILEY, Sec.

Reports submitted by Irene Checkley Bruce, Publicity Convener, O.D.N. & A.A.A.

QUEBEC:

Dr. Lyon P. Strean Honoured

The Faculty of Graduate Studies of McGill University has conferred the degree of Doctor of Philosophy in Medical Bacteriology and Immunity on Dr. Lyon P. Strean, a former graduate of this University.

NEW BRUNSWICK:

Saint John Dental Society

At a meeting of the Saint John Dental Society held at the Admiral Beatty Hotel on October 20 the following officers were elected: President, Dr. A. J. Coughlan (re-elected); Vice-President, Dr. J. R. Hutchison; Secretary, Dr. L. A. Langstroth; Treasurer, Dr. Howard W. MacDonald; and additional members of the executive, Dr. W. C. Caruthers and Dr. James O'Brien.

Dr. Thomas Manning gave an interesting talk on the work being done at the Health Centre and told of the extension of dental care by the sub-district board of health to the schools in Saint John County.

NOVA SCOTIA:

School Children Need Dental Care

Since the opening of the schools in September school dentists have found that 65% of the pupils in the Halifax schools are in need of dental care.

In the city 2678 children have been examined and 1793 were found to have defective teeth.—Halifax Star.

BRITISH COLUMBIA:

Victoria Dental Society

The Victoria Dental Society held its first clinic meeting since the summer recess in October.

Dr. Roy West of Seattle was the clinician, and on Saturday afternoon, in the offices of Drs. Nickells and Rumball, Dr. West removed a number of unerupted and impacted third molars. The Victoria dentists who were present all received much help from such an able and genial teacher and exodontist as Dr. West. He demonstrated effectively the use of the impactor replacing the bone chisel and hand mallet. Other instruments he favoured for exodontia were Clev Dent forceps numbers 150 and 151, C.D. elevators 46 and 30, rongeurs C.D. numbers 1 and 5, and a set of five root ejectors designed by Dr. West. After suturing he sprayed the area with dry sulphathiazole powder. Dr. West stressed keeping all incisions, as far as possible, on the crest of the ridge. He also made a plea for more painless hypodermic injections through greater care, "roughing" the tissues while injecting, and especially the use of razor sharp needles. Dr. West finds a Moyer No. 17 stone followed by the "V" hone most helpful in keeping needles keen.

That evening a dinner meeting of the Society was held at the Empress Hotel followed by coloured movies by Dr. West illustrating exodontia and oral surgery, which demonstrated how good colour photography of dental operations can be of great assistance in teaching proper technique.

Dental Education in Schools

The schools of the North Okanagan have purchased a set of seven lectures illustrated by film strips into which Dr. Weston A. Price has condensed his book "Nutrition and Physical Degeneration". There will be added also a copy of this book for the further education of those presenting the lectures.

R. C. Neish.

Vancouver Dental Society

The Vancouver Dental Society held its second monthly dinner and meeting of the 1942-43 season, at the Vancouver Hotel.

The guest clinician of the evening was Dr. Saul Robinson of Portland, Oregon, and his subject was "The Fundamentals of the Fournet Tueller Impression Technique".

Dr. Robinson very ably and clearly demonstrated the important steps in this exacting technique, particularly the delineation of the anterior and posterior fibres of the mylohyoid muscle and also the determination of the disto buccal angle of the impression.

The clinician provided also a table display showing the various technical stages in their sequence. This enabled one to follow the operative procedure with greater ease.

ALBERTA:

Edmonton Dental Society

Leaving his usual field of prosthetics, Dr. H. A. Gilchrist of the University of Alberta School of Dentistry presented "Dental Fluorosis and its Relationship to Dental Caries" at the first meeting of the Edmonton Dental Society for the 1942-43 season, held at the Macdonald Hotel on Tuesday, Oct. 6. Members, visitors and the junior and senior classes of the School of Dentistry present numbered more than sixty.

Since the present may be termed the Dental Fluorosis Phase of Dental Caries Research, Dr. Gilchrist's subject was fully dealt with and well received. The speaker traced the research that has been done since 1906 to the present day. He discussed the new knowledge of the aetiology and prevention of mottled teeth and of the immunity of dental caries which occurs in certain world-wide geographical areas having water supplies analyzing at least 0.6 parts of fluorine per million. The unsightly lesions resulting are formed during the calcification period from the seventeenth week of intra-uterine life to birth and from birth to the twelfth year. Dr. Gilchrist drew his conclusions from personal observations made during his many years with the Alberta Travelling Clinic, and gave a most outstanding address.

An interesting discussion was opened by Dr. A. M. Revell, Dr. G. A. Gemeroy, and Captain R. A. McEwen.

Dr. W. S. Hamilton, Director of the University of Alberta School of Dentistry reported during the evening that the sum of \$225.00 had recently been used to purchase more books

for the library and that the borrowing of books had been facilitated for those unable to visit the Medical-Dental Library by making a deposit for postage. A catalogue will soon be published and sent to every dentist in the province.

Dr. R. A. Rooney, Secretary of the Alberta Dental Association announced that dental assistants were entitled to the cost of living bonus as from August the 15, and that he would be pleased to receive any news items which might interest the officers and men of the Canadian Dental Corps overseas.

The November meeting of the Edmonton Dental Society was held at the Macdonald Hotel, November 6.

Dr. G. A. Gemeroy, Past President of the Edmonton Dental Society and lecturer at the University of Alberta School of Dentistry in Dental Materia Medica and Therapeutics, presented "Comparative Value of Drugs in Cavity Sterilization". In some detail Dr. Gemeroy reviewed the research undertaken by Barker in 1935, to prove the efficiency of certain drug agents in the sterilization of carious dentine *in vivo*. Under aseptic conditions infected dentine shavings were cultured in Rosenow's brain broth. After three minutes and after two weeks of drug action more shavings were cultured and the sterilizing ability of various drugs observed by microscopic examination of cultures grown. In reviewing the work of Barker, Dr. Gemeroy was able to conclude that:—

Morson's Kreosote sterilized 86%.

10% aqueous solution iodine sterilized 78%.

Pure liquid phenol sterilized 69%.

Physiological saline solution sterilized 47%.

Isotonic solution of iodine sterilized 44%.

50% solution of thymol in alcohol sterilized 39%.

50% solution of phenol in alcohol sterilized 29%.

Howe's ammoniacal silver nitrate sterilized 28%.

95% alcohol sterilized 28%.

Calgary Dental Society

Col. George Cameron of Ottawa was the guest speaker at the October meeting of the Calgary Dental Society. The members and Dental Corps guests appreciated a comprehen-

sive statement of the rapidly increasing activities of the Dental Corps.

A new portable military dental engine, purchased by subscription and from funds of the Society, has been installed in the Holy Cross Hospital. This engine is available to all members of the Society for use at the hospital or elsewhere.

Dental Nurses and Assistants

The first regular monthly meeting of the Edmonton Dental Nurses' and Assistants' Association was held at the home of Mrs. M. Cherry, on October 5, with Miss Charlotte Steele, the new president, presiding.

There were twelve members present, and Mrs. L. Janes and Mrs. H. MacCrostie representing the Women's Auxiliary of the Edmonton Dental Club. Also present was Cpl. Margaret Kuklo, a former member of the Association, who gave an interesting talk on basic training in the C.W.A.C. Mrs. MacCrostie gave a report on the Rummage Sale. A committee was appointed for arranging material for the meetings. It was also decided that each member be made responsible for one dollar to go toward the Christmas Fund.

Maxine Maloney, *Secretary*.

Calgary Dental Assistants

The October meeting of the Calgary Dental Assistants' Association was held on the 19th, in the Dental Society Room, with sixteen members present.

Refreshments were served by Miss Fay Aggett, Miss Margie Ellis and Miss Sally Cuthbert.

The guest speaker of the evening, Mr. Ross, of the Credit Protectors, gave a very interesting talk on "Delinquent Accounts."

The November meeting of the Calgary Dental Assistants' Association was held on November 9.

Following refreshments which were served by Miss Rae Settrington, Miss Dorothy Maxwell and Miss Joyce Locke, one of the members, Miss Margie Ellis, gave a very interesting discussion on "Delinquent Accounts". The President, Miss Vera White, suggested that each member bring a helpful hint to be read at the next meeting.

J. P. Locke, *Press Convener*.

EMPIRE NEWS

GREAT BRITAIN:

Industrial Medicine

Dr. T. O. Garland states that over 40,000,000 work-weeks were lost through sickness last year and he claimed that a striking reduction in this figure could be obtained if the simple, commonsense health measures were universally carried out. He pointed out that fatigue, infection at work and an inadequate or hurried midday meal are factors of primary importance in giving rise to illness and absence from work.—*Guy's Hospital Gazette*, Oct. 17.

MALTA:

News from Malta

Colonel Dixon, R.A.M.C., who recently returned to Britain after four years in charge of Army medical services on the Island of Malta spoke to a group of students on October 2.

Colonel Dixon told of the heroism of both Maltese and the R.A.F., who went up to give battle in old Gloster Gladiators made air-worthy with bits of rope.

On the question of diseases prevalent in Malta, Colonel Dixon said that sand-fly fever, summer diarrhoea, dysentery and catarrhal jaundice were the commonest, but no serious outbreaks had so far occurred.

Colonel Dixon told an amusing story of a German pilot who was shot down over Malta, and who was found on examination in hospital to be lacking his identity disc. The following morning a long canister was dropped on the local aerodrome, and painted in English on the canister were the words: "This is not dangerous and will not explode when opened. Please take to the Air Officer Commanding." Having made certain that the canister was, in fact, harmless, it was taken to the A.O.C., who opened it, and inside was an identity disc and

a note which read: "With the compliments of the A.O.C., Sicily, to the A.O.C., Malta. Enclosed is the identity disc of Lieutenant Joachim—. Will you kindly despatch an officer to Lieutenant Joachim—and tell him to write out five hundred times, 'In future, when I go on an operational flight, I must not forget to take my identity disc with me'."—*Guy's Hospital Gazette*, Oct. 17.

AUSTRALIA:

Tax on Toothbrushes

The Honorary Secretary of the Australian Dental Association made representations to the Federal Treasurer with regard to the imposition of a tax on toothbrushes.

A reply was received expressing the Commissioner's inability to accede to the request of the Association in view of the need to raise revenue by taxation.

Employment of Dental Assistants and Secretaries

Under National Security Regulations, the engagement of dental assistants and secretaries is now subject to governmental control. The appropriate regulation states that, with certain exceptions, no person shall seek to engage the services of any female person under the age of 45 years except through the National Service organization.

SOUTH AFRICA:

Postage on Dentures

Practitioners will be interested to know that dentures sent by post have been classified as brittle articles, and are therefore not eligible for transmission by insured parcel post. They can be consigned by registered post at letter rate not to exceed 16 ozs. in weight.—*South African Dental Jour.*

GENERAL NEWS

Procurement and Assignment

By order in council dated November 17, 1942 the Department of National Defence set up a Procurement and Assignment Board for physicians, dentists and medical and dental technical personnel.

The Canadian Dental Association was requested to arrange immediately for representatives of the dental profession to meet in Ottawa for purposes of discussion on Tuesday, December 8. Drs. Charron and Forest of Quebec, Drs. Fisk, Bradley and Harvey Reid of Ontario

and Dr. Leckie of Manitoba and Dr. Rooney of Alberta together with Dr. Walsh and secretary Gullett met in Ottawa on the above date. Lt. Col. Cameron was present representing the Director of Dental Services.

After hearing the outline of the whole plan for the health services of Canada it was decided unanimously that the Canadian Dental Association should fully co-operate in the project.

A Procurement and Assignment Committee for the Canadian Dental Association was set up consisting of Drs. Fisk (Chairman), Rooney, Bradley, Charron and Bagnal. The first undertaking of the committee will be the conducting of a thorough survey of the present dental situation in Canada. Cards for this purpose will be in the mails at the earliest possible date.

A.M.A. Cancels Meeting

The 1943 annual meeting of the American Medical Association which was to have been held in San Francisco has been cancelled because of conditions brought about by the war.

Journal of the A.D.A.

The American Dental Association has decided to publish a mid-monthly issue of its journal which will bring news items more up to date.

Dr. Harold Hillenbrand has been appointed Assistant Editor and the first issue of this new publication appeared on October 15.

Isolation of a New "Carotenoid" from Rat Liver

During an investigation of the influence of carcinogenic hydrocarbons upon the hepatic vitamin A stores of mice and rats, there was observed not only a marked difference in response by the two groups of animals, but even an unlikeness in the chemical composition of the unsaponifiable fraction of the livers. A study of this latter interesting dissimilarity has led to the isolation of a new carotenoid-like substance from rat liver.—*Cancer Research*, 2, 168, 1942 per Science.

U.S.A. Committee to Plan Salvage of Scrap Dental Materials

A committee has been appointed by the President of the American Dental Association to develop a program to salvage scrap ma-

terials from dental offices, such as discarded or obsolete instruments, equipment and appliances containing essential materials. The co-operation of every dentist will be asked when the Victory Scrap Drive is initiated.—*Jour. of A.D.A.*

Tobacco

The frantic cigarette advertising has encountered a setback at the hands of the U.S.A. Federal Trade Commission, which charges it with false claims. The Commission dismisses the extravagant assertions as to the lack of nose and throat irritation and as to the properties of competitors' brands. Even the quality of the scientific testimony adduced by certain advertisers is discounted. The claims regarding coolness, lack of irritation, aid to digestion, restoration of energy, slow burning and low nicotine content are denounced as false.—*Medical Times*, October, 1942.

Seven Out of Ten Don't

Seven out of 10 of our people do not clean their teeth and do not have savings accounts.

What a shortage of tubes there would be if these people got the impulse to start buying toothpaste now.

From: U.S. Egg & Poultry Magazine—Sept. 1942—A.D.A. Release.

U.S.A. Dental Officers Promoted

The names of eight U.S.A. dental officers have been submitted to the United States Senate for promotion from Lieutenant-Colonel to Colonel.—*Jour. of A.D.A.*

Professional Post-War Rehabilitation

The Wisconsin State Medical Society has prepared a card to be placed in doctor's offices and hospitals on which is printed the following:—"From a patriotic standpoint as well as in the interest of the future of public health, it is extremely important that the practice of the members of the medical profession who are in the armed forces be preserved for them upon their return to civilian life. Thus it is hoped that any patient whose family doctor is serving his country in the armed forces will resume such relationship after the war".

The Pennsylvania State Dental Society sends cards to each of its members on which appears the following:—"All members of the

Pennsylvania State Dental Society are eager to care for the patients of the dentists who are in the service of their country. We feel that this is our obligation, but we urge all such patients to return to these men when they are again in private practice".

It is suggested that the above card be placed in a prominent place in the reception room or in front of the chair in the operating rooms.

Fortune Survey

In the United States a "Fortune" survey revealed that 74.3 per cent of persons believed that the federal government should collect enough taxes after the war to provide "medical care for everyone who needs it."—*Jour. of A.D.A.*

Canada Approved Bread

In April, 1942, a new form of white bread was made available in Canada. This bread is made from a flour which is entirely extracted from the wheat berry, the so-called Canada Approved flour. In the milling of this flour the B complex vitamins, especially B₁, as well as important minerals, are retained to a much greater extent than in any other form of white flour. The bread made from this flour is indistinguishable in taste or appearance from that made from ordinary white flour. It has

been calculated that the Canada Approved Bread contains about 2½ times as much vitamin B₁ as is found in ordinary commercial white bread.—*Can. Med. Assoc. Jour., November, 1942.*

U.S. High Court to Get Doctors' Anti-Trust Case

The Supreme Court agreed today to review a decision holding the American Medical Association guilty of violating the Sherman Anti-Trust Act by alleged activities against a group-health organization in the District of Columbia.—*Chicago Daily News, Oct. 12, 1942.*

Accidents Kill More Persons Than Bombing

Since the beginning of the war, the German Luftwaffe has killed 43,000 English civilians in the greatest mass air raids the world has ever seen. During the year 1941, we killed 102,500 fellow Americans through accident alone. In addition, 9,300,000 were injured, 350,000 of them were permanently disabled.

The direct ascertainable cost of all these accidents was \$4,000,000,000. The indirect costs in human suffering, lowered efficiency, decreased production, etc., cannot be measured.—*A.D.A. Release.*

IN MEMORIAM

Albert Smith, of Cornwall, Ontario, aged 79, died November 10. He was graduated from the R.C.D.S. of Ontario in 1882 following which he commenced practice in Cornwall. He practised his profession for 58 years before retiring in 1940. During the First Great War he served for four years with the C.A.D.C. and rose to the rank of Lieutenant-Colonel, being decorated by His Majesty King George V, at Buckingham Palace, with the O.B.E. (Military), in recognition of his services.

He was a noted rifle shot and made several trips to Bisley with Canadian sharpshooters and carried off many prizes.

He was a lifelong Baptist, a deacon of many years standing and treasurer for many years.

In his younger days he was a noted runner and lacrosse player, being a member of the

Cornwall team which won the world championship in 1887-88.

He was a member of Cornwall Lodge, No. 125, A.F. and A.M. and a past master of the lodge.

Dr. Smith is survived by his widow, two sons, and a daughter.

William Burnett, of Galt, Ontario, aged 74, died November 15. He was taken ill while on a hunting trip in the French River District.

He was at one time alderman of the city. He was an elder of the First United Church, a member of Waterloo Lodge I.O.O.F. and a life member of Galt Lodge, A.F. and A.M. During his life he was a great curler, football player, baseball pitcher, golfer, hunter, soccer player, bowler and fisherman. In 1888 he was selected for an

all-Canadian football team that toured the Old Country.

He was a graduate of the R.C.D.S. of Ontario and began practice in Ingersoll where he served on the town council and the school board before he moved to Galt in 1905.

Dr. Burnett is survived by his widow, one daughter, Dr. Marita Burnett, a dentist in Toronto, two brothers and three sisters.

•

F. W. Barbour, of Toronto, Ontario, aged 71, died November 17. He was graduated from Tuft's Dental College in Boston, in 1891. He began his practice in Fredericton, New Brunswick, leaving there in 1916 to enlist in the Canadian Army Dental Corps.

At the conclusion of the war he opened an office in Toronto. He was a member of the Granite Club, Lawrence Park Lawn Bowling Club, a member of the I.O.O.F. and Yorkminster Baptist Church.

Dr. Barbour is survived by his widow, three sons, four sisters, and a brother.

•

Major Thomas E. Hayhurst, of Windsor, Ontario, is reported, by the Toronto Telegram, killed at Dieppe.

Major Hayhurst, aged 40, was a well-known Windsor dentist. He was graduated from the Faculty of Dentistry, University of Toronto, and took post-graduate work in New York City. He commenced practice in Windsor in 1930.

He was an accomplished marksman, and was senior in command of the 1938 rifle team from Canada which won the Rajah of Kolapore's Challenge Cup at the Bisley Shoot.

Major Hayhurst is survived by his widow and a son who was born shortly after he went overseas.

•

Frank E. Sandercock, of Drumheller, Alberta, aged 54, died October 22 following a brief illness. He was born in Woodstock, Ontario. For the past five years he practised his profession in Drumheller and for fourteen years previous to that in Calgary.

For two years he was president of the

Canadian Amateur Hockey Association and in 1929 was made an honorary life member of the organization. It was during his term of office that the historic Allan Cup was handed over to the C.A.H.A. at the Chateau Laurier, in Ottawa, March 26, 1928.

He was also interested in the early development of oil in southern Alberta.

Dr. Sandercock is survived by his widow, two daughters, one son, two brothers, his mother and two sisters.

•

Elmer James Hambly, of Willowdale, Ontario, died November 4 following a brief illness. He was graduated from the Royal College of Dental Surgeons of Ontario in 1905.

He established a practice in Toronto following graduation. In 1941 he gave up his Toronto office and began to practise at Willowdale where he had been a resident for the past 21 years.

He had been in charge of dental clinics for the schools of North York for several years. He was also active in the Liberal Association of North York.

Dr. Hambly is survived by his widow, a daughter and a son.

•

Edouard Prefontaine, of Montreal, Quebec, aged 51, died October 24 following a brief illness.

Dr. Prefontaine is survived by his widow, two sons, his father, two brothers, and seven sisters.

•

Andrew John Courtice, of Winnipeg, Manitoba, aged 65, died November 20. He was graduated from Northwestern University, Chicago, 37 years ago. For two years he practised in Maple Creek, Saskatchewan, before moving to Winnipeg.

He was a member of the Masonic Order, the Strathcona Curling Club and Young United Church.

Dr. Courtice is survived by his widow, two daughters, a son, four grandchildren, two sisters and two brothers.

... SECTION FRANÇAISE ...

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516 est, rue Sherbrooke, Montréal, Québec

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Le Réveil

La guerre avait depuis trois ans vidé tous les cerveaux, concentré toutes les attentions et paralysé toutes les activités. Tout semblait bien devoir périr dans la catastrophe à part le lucratif commerce du sang et des vies. Mais l'humanité se fatigue du carnage et les carnassiers eux-mêmes perdus par l'insatiabilité de leurs appétits, libéreront le monde en se dévorant entre eux.

On dirait que les hommes de bon sens pressentent quelque chose et commencent à se réveiller pour songer à l'avenir. Devenu pessimiste à force de mieux connaître les grandeurs humaines, je me reprends à espérer et à croire, quand un petit groupe de gens sincères et capables entreprennent de travailler au bien d'autrui.

C'est ce qui se passe dans notre monde dentaire, car il est évident qu'on veut du changement. Une grande campagne d'hygiène va remplacer les cris de mort et de destruction. Un comité d'hommes sérieux, émus du grave danger qui menace la vie scientifique de notre profession a décidé de sauver notre journal en le prenant sous sa protection. Ce sont là des oeuvres de vie auxquelles personne ne peut refuser de collaborer. Ils vont demander votre concours pour sauver votre avenir professionnel. Avez-vous le droit de le leur refuser?

Alcide Thibaudeau.

Les Facultés de Chirurgie Dentaire Remplissent-elles Pleinement leur Objet?

Serait-il possible d'améliorer l'enseignement de façon qu'il réponde mieux aux besoins?

Par le DOCTEUR ERNEST CHARRON
Secrétaire de la Faculté de Chirurgie Dentaire

Je vous ferai part, ce soir, des observations que j'ai eu l'occasion de faire, pendant un quart de siècle, en tant que professeur à la Faculté de chirurgie dentaire de l'Université de Montréal. Tout en restant dans mon domaine, que je connais mieux que les autres, je crois que mes remarques s'appliquent, d'une façon générale, à l'ensemble de l'enseignement.

Je ne crois pas, bien entendu, que mes observations soient plus importantes ni plus intéressantes que les vôtres, mais j'imagine que, dans une réunion comme celle-ci, il incombe à chacun d'exposer ses vues et ses opinions personnelles. Il est possible que votre point de vue ne soit pas le même que le mien et qu'en conséquence, mon expérience soit d'une utilité restreinte dans l'examen de la question que nous allons discuter. Dans la discussion qui suivra mes remarques, j'espère que chacun voudra bien, dans l'esprit confraternel qui nous anime tous, faire les mises au point nécessaires.

Les facultés de chirurgie dentaire remplissent-elles pleinement leur objet? Serait-il possible d'améliorer l'enseignement de façon qu'il réponde mieux aux besoins? Tels sont, me semble-t-il, les deux points qu'il y a lieu de considérer.

L'objet d'une faculté de chirurgie dentaire, c'est de former des sujets qui soient capables de répondre aux légitimes exigences des patients. Quand une personne se présente chez le dentiste, qu'elle le connaisse ou qu'elle ne le connaisse pas, elle s'adresse à lui en toute confiance, sachant qu'il a un diplôme attestant qu'il a le droit d'exercer sa profession. Le patient attend du dentiste des soins appropriés, quelle que soit la gravité ou la complexité de son cas, dont il ne saurait d'ailleurs se rendre lui-même compte.

Le jeune dentiste est-il en état de faire face à toutes les situations? A la Faculté, on lui a enseigné longuement la chirurgie dentaire; on lui a inculqué des notions de médecine; on s'est efforcé de lui faire acquérir des connaissances de base en anatomie, en biologie, en physiologie, en pathologie, en histologie, en bactériologie. Il va sans dire qu'il a passé, sur toutes ces matières, des examens satisfaisants. Mais, lorsqu'il s'agit de mettre en pratique ce qu'il a appris, ou plutôt ce qu'il a retenu, et d'en faire bénéficier un patient, comment se tire-t-il d'affaire?

On ne saurait mieux s'en rendre compte que lorsqu'on se trouve en présence de complications, soit à l'hôpital, soit au cours d'une consultation, soit encore dans l'examen d'un patient ou même dans l'étude d'un dossier lorsqu'il s'agit d'un procès en dommages-intérêts. Bien entendu, je ne songe pas ici aux cas les plus simples, où le dentiste moyen réussit assez bien, et dont on n'entend jamais parler. Je pense aux cas présentant quelque difficulté, bien que parfois les cas les plus ordinaires donnent lieu à de graves complications.

Il est presque toujours possible, comme vous le savez, de découvrir la cause des complications que l'on constate. Elles proviennent bien souvent du manque de soin, de l'irréflexion, d'un examen insuffisamment approfondi ou d'un diagnostic erroné. Ne croyez-vous pas que, la plupart du temps, elles eussent été prévenues si le dentiste avait appliqué ses connaissances anatomiques, s'il avait recouru à la technique

indiquée, ou même s'il avait pris en temps utile des précautions élémentaires? Il arrive aussi qu'un dentiste entreprenne une intervention sans se rendre compte qu'il est incapable de la mener à bien, et son initiative maladroite est presque toujours une cause d'aggravation. Il arrive encore qu'il accepte de traiter un patient dont l'état pathologique exigerait au préalable les soins d'un médecin ou tout au moins une consultation. Si tous les dentistes sont censés être en état de pratiquer convenablement la chirurgie mineure, on ne saurait exiger d'eux, surtout à leurs débuts, qu'ils soient aptes à faire des interventions relevant de la chirurgie majeure. Ils doivent référer ces cas-là à des spécialistes, ou du moins à des confrères plus expérimentés. Mais encore faut-il qu'ils sachent discerner, au moyen d'un diagnostic précis, les cas qu'ils peuvent traiter eux-mêmes et ceux qu'ils doivent confier à d'autres.

Trop de dentistes—vous en connaissez sans doute—traversent la vie avec des oeillères. Vous savez comment les choses se passent chez ces praticiens à l'esprit superficiel. Quand une personne s'assied dans le fauteuil, chez l'un de ces dentistes, et lui indique la dent qui lui fait mal, le dentiste y jette un coup d'oeil et prend une décision sans s'arrêter à penser qu'une dent n'est qu'un organe enchâssé dans des tissus et que ces tissus font partie d'un organisme. Il ne se rend pas compte, ou plutôt il oublie qu'il devrait se préoccuper de l'état de l'organisme. Il devrait se rappeler toutes les connaissances qu'il a acquises et les appliquer, non pas d'une manière générale et presque automatique, mais au cas particulier qu'il a devant lui et qui diffère peut-être de tous les cas qu'il a vus jusque-là. Comme vous le savez, un même désordre n'a pas la même gravité chez tous les patients et il n'évolue pas toujours de façon identique. Un vieux médecin français avait coutume de dire: "Il n'y a pas de maladies, il n'y a que des malades."

N'est-on pas justifiable de conclure qu'en règle générale, les diplômés sortant des facultés de chirurgie dentaire ne sont pas en mesure de servir la clientèle d'une façon satisfaisante? A qui imputer la responsabilité de cet état de choses? Et comment y remédier?

L'enseignement de la chirurgie dentaire a fait des progrès remarquables dans notre pays, surtout depuis une vingtaine d'années; mais vous savez qu'il a réalisé, aux Etats-Unis, des progrès encore plus remarquables. Vous me direz peut-être que c'est une question d'argent. Sans doute, l'argent a son importance, mais ce n'est pas tout. Il n'est pas sans intérêt de rappeler que l'enseignement de la chirurgie dentaire a connu, même aux Etats-Unis, une période très difficile. Il fut un temps, qui n'est d'ailleurs pas si lointain, où l'on fondait des écoles dentaires sans ordre ni discipline, comme on établit une entreprise commerciale. Mais, devant la médiocrité de l'enseignement qui résultait de ces efforts dispersés et de cet esprit mercantile, les meilleurs éléments de la profession se sont émus et, grâce à leur travail consciencieux et persévérant, ils ont réussi à opérer les réformes qui s'imposaient et qui ont rendu possibles les progrès que nous constatons aujourd'hui. Aussi, y a-t-il lieu de croire qu'aux Etats-Unis et au Canada les programmes sont suffisants et au point. Mais n'y aurait-il pas lieu d'améliorer les méthodes d'enseignement?

Il est évident que la formation du dentiste exige l'étude de plusieurs matières théoriques. Seulement, la théorie laisse très peu de chose dans la mémoire de l'élève si le professeur néglige de rendre son enseignement vivant en montrant, chaque fois qu'il en a l'occasion, des applications pratiques de ses exposés. Pour se faire bien comprendre, il est recommandable de recourir à des comparaisons aussi simples que possible et de faire, par exemple, des rapprochements entre les divers phénomènes physiologiques et les choses usuelles que l'élève a sous les yeux et dont il se sert tous les jours. Un professeur qui décrivait le nerf trijumeau le comparait à une conduite d'électricité amenant le courant dans une maison et qui, à l'intérieur, se diviserait en trois secteurs autonomes alimentant les trois étages de la maison. Si, ajoutait-il, vous

désirez réparer l'une des lampes du deuxième étage, vous n'avez qu'à interrompre le courant à cet étage-là, sans toucher aux deux autres secteurs.

Il ne faut d'ailleurs jamais hésiter à répéter, même plusieurs fois, les choses élémentaires, ou du moins qui paraissent élémentaires aux yeux du professeur. L'élève qui n'aura pas suffisamment compris une donnée de base éprouvera ensuite de grandes difficultés à saisir le développement dont elle est le point de départ. Bien souvent un professeur, surtout après plusieurs années d'enseignement, est enclin à prendre pour acquis que les élèves savent telle ou telle chose qu'ils sont censés connaître peut-être, mais que plusieurs ignorent et que d'autres ont oubliée. "Cela va sans dire," croit-il. Il est certain que, dans bien des cas, cela va beaucoup mieux en le disant.

Les élèves ne discernent pas toujours l'importance ni même l'utilité de certaines matières théoriques, et ils s'en désintéressent. Cette erreur d'appréciation est susceptible d'avoir de sérieuses conséquences, puisqu'elle laissera parfois dans la formation du jeune dentiste une lacune que rien ne viendra combler par la suite. Si les élèves ne savent pas apprécier, bien souvent, l'usage qu'ils feront dans la pratique de certaines sciences dont on leur enseigne les éléments, c'est qu'il existe, entre diverses matières théoriques, des espèces de cloisons étanches qui les empêchent d'apercevoir le lien qu'elles ont entre elles. Il est bien peu d'élèves qui aient une maturité d'esprit suffisante pour pouvoir faire la synthèse de l'enseignement qui leur est donné par des professeurs différents ayant des méthodes différentes. C'est donc à chaque professeur qu'il appartient de faire bien saisir à ses élèves l'application de la science particulière qu'il enseigne, non pas isolément et, pour ainsi dire, mécaniquement, mais en fonction des autres sciences avec lesquelles sa matière forme un tout. Quand on aura ainsi habitué les élèves à faire cet effort de coordination, on aura sans doute rendu l'enseignement plus réaliste, plus intéressant, plus vivant.

On aura, en même temps, développé leur esprit d'observation et leur faculté de raisonnement, si nécessaires à l'exercice de notre profession. Je crois devoir signaler à ce sujet que, dans les facultés de chirurgie dentaire, on ne fait pas assez, en général, d'expériences cliniques. Evidemment, les élèves fréquentent l'amphithéâtre ou l'hôpital, mais ils sont généralement trop nombreux pour pouvoir suivre avec fruit la leçon du professeur ou du démonstrateur. Au surplus, quand un élève est appelé à opérer lui-même, la plupart du temps on n'exige pas, comme on devrait le faire, qu'il motive clairement chacune de ses actions. Ce n'est que par une initiation sérieuse à la pratique que l'on mettra le jeune dentiste en mesure de donner à ses patients les soins qu'ils sont en droit d'attendre de lui.

Quand le dentiste a soigneusement examiné un patient et qu'il a arrêté le mode d'intervention qui convient, en tenant compte de tous les éléments qui se rattachent à son champ opératoire, il devrait être capable de prévoir avec exactitude tout ce qui va se passer. Il devrait être comme un homme attentif qui, au moment où un film qu'il connaît dans le détail commence à se dérouler, n'ignore aucun des épisodes qui vont se succéder et sait parfaitement dans quel ordre ils vont s'enchaîner.

Il n'est peut-être pas inutile de faire remarquer aux élèves, à l'occasion, que ce n'est pas le patient qui est fait pour le dentiste, mais que c'est le dentiste qui est fait pour le patient. On voit trop souvent, en effet, un praticien se soucier avant tout de la manière de se tirer d'affaire le plus facilement et le plus rapidement possible, au lieu de se préoccuper d'abord du patient et de ce que son état général permet de prévoir ou de prévenir. Il ne s'agit pas d'en finir au plus vite. Il s'agit de choisir l'anesthésique qui donnera le meilleur résultat en entraînant les moindres inconvénients, puis de faire l'intervention qui s'impose en s'efforçant de préserver, dans toute la mesure du possible, les tissus auxquels il faut s'attaquer.

Il importe de faire comprendre aux élèves que le diplôme qui leur est décerné, s'il atteste qu'ils ont passé des examens satisfaisants et s'il leur confère le droit d'exercer,

ne signifie pas cependant qu'ils savent tout. Plusieurs s'imaginent que, leurs études étant terminées, ils n'ont plus besoin d'étudier. Il n'est pas d'erreur plus grave, parce que, dans notre profession comme dans toutes les autres, celui qui n'avance pas recule. Il est donc à propos de convaincre les élèves que, selon la formule d'un vieil éducateur, ils viennent à l'école pour apprendre à apprendre. Aussi doit-on leur inculquer le goût de la lecture et leur montrer quel parti ils peuvent en tirer, à tout âge, en vue de leur perfectionnement.

Enfin, l'enseignement, dans n'importe quelle branche du savoir humain, ne va pas sans l'éducation. Aussi ne doit-on jamais laisser échapper une occasion de former la conscience professionnelle de l'élève et de lui inculquer le sens des responsabilités, qui devrait être l'un des principaux éléments moraux de sa formation. Il convient aussi de le convaincre qu'il a tout intérêt à reconnaître virilement les erreurs qu'il pourrait lui arriver de commettre dans l'exercice de sa profession. Les erreurs, même lorsqu'elles sont coûteuses, sont souvent profitables, parce que l'homme à l'esprit réfléchi sait en tirer de l'expérience. Il importe surtout que le jeune dentiste soit conscient de son utilité sociale et se montre toujours empressé à rendre à ses concitoyens tous les services que les membres de l'élite doivent au groupement humain au milieu duquel ils vivent.

La fièvre d'intolérance au sulfathiazol *

Par GEORGES BICKEL et P. GUYE

"Les auteurs de cet article, après avoir signalé la thérapeutique du sulfathiazol étudient la fièvre d'intolérance chez les sujets traités à ce médicament. Ils précisent non seulement les conditions d'apparition de cette fièvre médicamenteuse, mais en expliquent aussi les caractéristiques cliniques, l'évolution et la signification pronostique. Comme la fièvre du sulfathiazol n'a fait jusqu'ici l'objet d'aucune étude particulière, nous recommandons la lecture de cet article. Dans un prochain numéro, nous donnerons la traduction complète d'un autre article sur l'usage et les réactions toxiques des composés sulfamidés spécialement écrit pour les dentistes."

Paul Geoffrion.

Les premiers auteurs qui ont étudié l'action thérapeutique du sulfathiazol (3714 Ciba ou Cibazol), l'un des derniers nés mais déjà l'un des plus puissants représentants de la médication sulfamidée, ont insisté sur le fait que ce corps se distinguait non seulement par sa grande activité anti-infectieuse, mais encore par la façon remarquable dont il est toléré par l'organisme. Cette faible toxicité du sulfathiazol, signalée presque simultanément aux Etats-Unis d'Amérique par LONG (1) et FLIPPIN (2), en Suisse par GSELL (3) et par nous-mêmes (4), a été dès lors confirmée dans plusieurs douzaines de publications. Il est en particulier acquis que le sulfathiazol ne provoque pour ainsi dire jamais les accidents les plus redoutables de la sulfamidothérapie, soit l'agranulocytose et l'ictère grave. C'est grâce à cette toxicité minima que l'on a pu entreprendre récemment le traitement de certaines septicémies graves, tout spécialement celui des méningites aiguës purulentes, avec les doses massives de 12 à 16 grammes de Cibazol par jour, et que l'on a pu administrer le même médicament, aux doses déjà importantes de 6 grammes par jour, pendant près de cent jours consécutifs, à certains sujets atteints d'endocardite streptococcique subaiguë¹.

Cette excellente tolérance générale ne signifie pourtant pas que l'organisme des malades demeure complètement indifférent à l'administration du sulfathiazol. Nous croyons même pouvoir affirmer, après expérience de plus de quinze mois, que le

(*) Revue Médicale de la Suisse Romande.

Cibazol se signale, parmi les dérivés les plus communément utilisés de la sulfanilamide, par deux symptômes d'intolérance particulièrement fréquents: la fièvre et les exanthèmes. Il est vrai qu'il s'agit là presque toujours d'incidents bénins et passagers, disparaissant en quelques heures ou en peu de jours lorsqu'on suspend le traitement.

Les exanthèmes du sulfathiazol, magistralement décrits par HAVILAND et LONG (5), ne nous arrêteront pas ici. Leurs caractères morphologiques et leur évolution sont actuellement bien établis et leur origine médicamenteuse est aisément reconnue par tout médecin averti.

La fièvre du sulfathiazol, en revanche, n'a fait jusqu'ici l'objet d'aucune étude particulière. Certes, la plupart des auteurs rapportent que les éruptions dues au Cibazol s'accompagnent volontiers d'une poussée fébrile, susceptible parfois de précéder l'exanthème et s'éteignant dans la règle en même temps que lui. Mais on n'a pas cherché jusqu'ici à préciser les conditions d'apparition de cette fièvre médicamenteuse, ses caractéristiques cliniques, son évolution et sa signification pronostique. La connaissance précise de ces caractères serait d'autant plus importante que la fièvre d'intolérance au sulfathiazol, facilement reconnaissable quand elle survient chez un sujet apyrétique, peut, lorsqu'elle se manifeste au cours d'une affection fébrile, en masquer dans une certaine mesure l'évolution. Il devient alors difficile de dégager la responsabilité respective de la maladie et du médicament dans la genèse de la fièvre.

* * *

La fréquence de la fièvre d'intolérance au sulfathiazol est telle que nous l'avons rencontrée dans un cas sur six environ, en ne tenant compte que des malades ayant reçu des doses quotidiennes supérieures à quatre ou six grammes pendant plus de six jours consécutifs. Elle est en revanche très exceptionnelle chez les sujets ayant absorbé le médicament pendant moins de cinq jours ou ne l'ayant reçu qu'aux faibles doses de trois à quatre grammes par jour.

Dans la règle, la fièvre s'installe assez brusquement, du septième au dixième jour après le début du traitement, pour atteindre son maximum, aux environs de 39 ou 40°, en 24 ou 48 heures. Elle s'abaisse ensuite rapidement, en un ou deux jours, à condition qu'on interrompe le médicament.

La courbe de température recueillie chez une jeune femme ayant reçu une cure de Cibazol d'intensité moyenne, en raison d'une poussée grave et très résistante de pyorrhée alvéolo-dentaire, nous montre l'aspect classique de la fièvre d'intolérance au sulfathiazol. La température, parfaitement normale les six premiers jours du traitement, s'élève à 38° le soir du septième jour, alors que la malade a reçu une dose totale de 34 grammes de Cibazol. Elle atteint 40°, 1 le soir du huitième jour, ceci malgré l'interruption du traitement. La fièvre s'abaisse ensuite rapidement pour disparaître deux jours plus tard.

Le caractère médicamenteux de la fièvre fut affirmé, dans ce cas particulier, par l'apparition, en même temps que la fièvre, d'une forte injection des conjonctives. Nous avons rencontré cette *conjonctivite toxique*, décrite pour la première fois par HAVILAND et LONG (5), chez la moitié environ de nos malades atteints de réaction fébrile au sulfathiazol. Il s'agit là d'une réaction tout à fait propre à ce médicament, réaction qu'on n'avait jamais observée auparavant au cours de la fièvre due à d'autres dérivés de la sulfanilamide (HAGEMAN et BLAKE, 6). Cette conjonctivite consiste en une hyperémie primitivement angulaire, puis généralisée à toute la conjonctive, prédominant cependant sur ses portions bulbaire et sclérotique. Assez souvent l'œil le plus proche de la lumière est touché le premier ou même de façon exclusive. Subjectivement la conjonctivite s'annonce par une impression de cuisson, bientôt suivie de larmoiement. Nous l'avons vue, dans des cas exceptionnels, prendre le caractère hémorragique ou s'accompagner d'une forte réaction œdémateuse des paupières.

Presque toujours l'injection des conjonctives s'accompagne d'une *éruption cutanée*. Nous avons observé cette réaction chez les quatre cinquièmes environ de nos malades fébriles. C'est dire que la présence d'une éruption est presque la règle chez les sujets atteints de fièvre d'intolérance au Cibazol. Cette éruption peut se faire selon trois types principaux maculo-papuleux, urticarien et érythémato-nodulaire.

La réaction *maculo-papuleuse* se superpose dans ses grandes lignes aux altérations du même type décrites par SCHWENTGER et GELMAN (7), par MENVILLE et ARCHINARD (8) et par FRANK (9) chez les sujets traités par la sulfanilamide. Il s'agit alors de taches de quelques millimètres ou de quelques centimètres de diamètre, s'unissant par confluence en plaques irrégulières. Leur siège de prédilection se trouve au niveau des genoux, des coudes, à la face postérieure des avant-bras et sur le dos des mains, exceptionnellement au niveau du visage. Ces taches, généralement peu prurigineuses, s'effacent en peu de jours lorsqu'on interrompt la médication.

La réaction *urticarienne*, un peu moins fréquente, débute dans la règle au niveau des extrémités, d'où elle se généralise assez souvent en envahissant le tronc. Elle est constituée d'éléments surélevés, rouges, bien délimités, irrégulièrement épaissis, de un à trois centimètres de diamètre.

La réaction *érythémato-nodulaire*, bien que relativement rare, est la plus caractéristique. Elle est formée d'éléments nodulaires surélevés, rouges, de deux à cinq centimètres de diamètre, ressemblant à s'y méprendre aux lésions d'un érythème nouveau banal. Les nodules siègent surtout à la surface d'extension des avant-bras et des jambes, au voisinage des chevilles et des poignets, dont ils entraînent parfois la tuméfaction. Les réactions urticarienne et érythémato-nodulaire, très exceptionnelles avec les dérivés sulfamidés autres que le sulfathiazol, peuvent coexister ou s'intriquer chez le même sujet.

La fièvre, les éruptions et la conjonctivite se manifestent en général de façon simultanée, ce qui permet d'envisager que ces trois réactions ont une signification identique. Nous avons vu pourtant la fièvre précéder de plusieurs heures ou de quelques jours l'apparition de l'exanthème. Celui-ci constitue d'autres fois le symptôme initial et peut alors se dessiner un jour ou deux déjà avant l'élévation de la température. Les trois réactions, et plus spécialement l'exanthème, peuvent d'ailleurs exister isolément, ce qui traduit habituellement un syndrome d'intolérance atténué.

Assez souvent nous avons noté, en même temps que la fièvre, l'existence d'une *leucocytose modérée avec augmentation légère des polynucléaires éosinophiles*, dont le pourcentage atteint alors 2 à 6 pour cent du chiffre des globules blancs. Cette réaction leucocytaire, que nous avons vue une seule fois atteindre le chiffre de 33000 globules par mmc., s'atténue en même temps que la fièvre et ne lui survit guère plus d'un ou deux jours.

La fièvre d'intolérance au sulfathiazol survient dans la règle du septième au dixième jour du traitement. Ce caractère lui confère une certaine *analogie avec la maladie du sérum*, qui s'accompagne comme elle de réactions cutanées et d'éosinophilie. Dans un seul cas nous avons constaté le développement d'un exanthème le troisième jour et l'apparition de la fièvre le cinquième jour déjà après le début du traitement. Il s'agissait d'une malade de 76 ans atteinte d'artériosclérose, de myocardite et de broncho-pneumonie de la base droite. Le traitement au Cibazol entraîna dès le second jour la chute de la température qui devait remonter à 39°,2 deux jours plus tard, alors que la malade avait reçu une dose de 15 grammes du médicament. L'interruption du traitement fut suivie de la chute immédiate et définitive de la température. On comprend combien cette fièvre thérapeutique précoce, survenant à un moment où les symptômes d'auscultation n'ont rien perdu de leur intensité, peut être d'interprétation difficile lorsqu'elle ne s'accompagne pas d'un exanthème révélateur.

Si l'on calcule la dose médicamenteuse reçue lors de l'apparition de la fièvre, on s'aperçoit qu'elle est le plus généralement comprise entre 30 et 50 gr. C'est dire que la réaction thermique s'installe à un moment où la plupart des malades, plus spécialement les pneumoniques qui constituent pour l'instant l'indication majeure de la thérapeutique par le sulfathiazol, sont déjà arrivés au terme de leur traitement. La fièvre due à la maladie est tombée depuis plusieurs jours déjà, mais les symptômes d'auscultation n'ont point encore disparu, et c'est la raison pour laquelle on a trop souvent confondu, lors des débuts de la thérapeutique sulfamidée, cette fièvre d'intolérance avec une rechute de la maladie. Actuellement la confusion n'est plus guère possible que dans les cas où la fièvre s'installe isolément, c'est-à-dire en l'absence d'exanthème et de conjonctivite, et l'interruption du traitement vient en pareil cas rapidement confirmer l'origine réelle de la réascension thermique.

Mais la situation peut être, au cours même de la pneumonie, infiniment plus compliquée. Tels sont en particulier les cas dans lesquels le malade passe directement de la fièvre pneumococcique à la fièvre thérapeutique, sans que se soit produite la défervescence intermédiaire. Le tracé recueilli chez une femme de 48 ans hospitalisée pour une spléнопneumonie de la base gauche, est particulièrement typique de cette modalité. Avant son entrée dans notre service, cette malade avait reçu de son médecin 10 gr. de Cibazol en deux jours. La même thérapeutique fut poursuivie pendant huit jours, jusqu'à une dose totale de 57 gr. Malgré ce traitement intensif la fièvre ne s'abaisse que de façon insignifiante et très transitoire, l'état général demeurant par ailleurs excellent. Cette température en plateau, très anormalement prolongée et surtout cette résistance extraordinaire à la thérapeutique sulfamidée commençaient à nous inquiéter lorsque apparut, au quatorzième jour de la maladie, une éruption maculo-papuleuse caractéristique, nous permettant de supposer que la prolongation anormale de la fièvre était vraisemblablement due au médicament plus qu'à la maladie elle-même. De fait, la température tomba, de façon immédiate et définitive, dès que fut suspendu le traitement, tandis que l'éruption s'effaçait en trois jours, ne laissant qu'un léger prurit passer.

Nous avons observé à maintes reprises ce passage direct de la fièvre pneumococcique à la fièvre thérapeutique chez des malades n'ayant reçu, au début de leur maladie, qu'un traitement sulfamidé insuffisant. La courbe thermique suivante en est un exemple particulièrement instructif. Elle concerne un jeune homme de 21 ans, atteint d'une broncho-pneumonie grippale à foyers multiples, dont le traitement ne fut entrepris qu'au cinquième jour de la maladie, par les doses timides de 3 gr. de Cibazol par jour. Cette thérapeutique trop prudente n'entraîna qu'une diminution insignifiante de la température. Aussi conseillons-nous, lorsque nous voyons le malade, au neuvième jour de sa maladie, d'élever la dose de Cibazol à 8 gr. pendant vingt-quatre heures, puis de la maintenir à 6 gr. les jours suivants. La fièvre, loin de s'atténuer, s'éleva progressivement de 40° à 40,4° puis à 41°, sans qu'on pût constater aucune péjoration de l'état anatomique des poumons. Après une semaine de ce traitement intensif, l'auscultation des poumons ne montrait plus le moindre symptôme anormal, ce qui nous permit de suspecter l'existence non pas d'une complication infectieuse mais bien d'une fièvre d'intolérance au Cibazol. L'interruption du traitement confirma ce soupçon, en provoquant une défervescence immédiate et définitive. L'absence d'exanthème, de conjonctivite et d'éosinophilie nous avait empêché, dans le cas particulier, de diagnostiquer d'emblée une fièvre d'intolérance dont l'intensité et la durée furent ici tout à fait anormales.

Une autre difficulté tient au fait que la fièvre d'intolérance au sulfathiazol peut se manifester de façon précoce, dès le deuxième ou le troisième jour du traitement, chez des sujets n'ayant reçu que quelques grammes de Cibazol. Il s'agit alors toujours de malades ayant été soumis à une cure sulfamidée antérieure qui avait déjà donné lieu à des accidents d'intolérance. C'est ainsi que le tracé suivant

représente la courbe de température d'une femme de 76 ans, hospitalisée pour une bronchite diffuse fébrile, avec expectoration purulente riche en pneumocoques. Cette constatation bactériologique nous engage à entreprendre un traitement cibazolique. Or la température, qui jusque-là ne dépassait pas 38°, s'élève et atteint 39° dès le second jour du traitement. Le lendemain une éruption médicamenteuse se développe sur les mains, les genoux et la face, et, malgré la régression déjà sensible des signes de bronchite, la température reste élevée. Après une cure de 24 gr. on arrête l'administration du Cibazol. La défervescence suit aussitôt, la température passant de 39° à 36,3° en douze heures. La disparition de l'éruption est complète en trois jours et la bronchite est guérie définitivement. Nous avons appris ultérieurement que la malade avait reçu, six mois auparavant, en raison d'une affection pulmonaire fébrile, un traitement de Cibazol ayant déterminé au bout d'une semaine des phénomènes d'intolérance typiques.

De nombreuses observations analogues nous ont montré que les accidents d'intolérance entraînaient dans la règle une *véritable sensibilisation de l'organisme à l'action toxique du sulfathiazol*. La fièvre et les exanthèmes peuvent alors se manifester de façon presque instantanée lorsqu'une affection ultérieure oblige à remettre en œuvre un nouveau traitement sulfamidé. C'est ainsi que nous avons vu, en pareilles conditions, la température s'élever en quelques heures de 38° à 40° et l'éruption apparaître moins d'un jour après la reprise du traitement.

Il peut arriver aussi que l'intolérance se manifeste *simultanément pour plusieurs médicaments* de la série sulfamidée. C'est ainsi que nous avons vu des pneumoniques qui avaient présenté un exanthème ou de la fièvre à l'occasion d'une cure de sulfapyridine ne plus supporter un traitement ultérieur par le sulfathiazol. L'observation de la malade dont la courbe de température est reproduite ci-dessous nous montre une fièvre médicamenteuse qui, après avoir été provoquée par un traitement au Dagénan, fut ultérieurement entretenue par un traitement cibazolique. Il s'agit d'une jeune femme de 30 ans, atteinte d'une congestion pulmonaire grippale, fort correctement traitée par son médecin de famille qui lui administra avec plein succès une dose totale de 21 grammes de sulfapyridine. Cette médication provoqua pourtant quelques vomissements et la température qui, pendant quelques jours avait baissé de 40° à 37,4°, remonta bientôt au-dessus de 39°. Le médecin traitant, persuadé d'une rechute grave, fait entrer sa cliente à l'hôpital. La malade présente alors, en plus d'une éruption maculo-papuleuse récente, une fièvre élevée et un gros foyer broncho-pneumonique à la base du poumon droit. Devant la gravité du tableau, et malgré notre incertitude de l'origine infectieuse ou médicamenteuse de l'hyperthermie, nous instituons une cure de Cibazol, dont la malade absorbe 22 gr. 50 en cinq jours, sans présenter ni intolérance gastrique, ni injection conjonctivale. Bien plus, l'érythème constaté à l'entrée s'efface dès le premier jour d'hospitalisation. La température reste néanmoins élevée et au cinquième jour de la médication cibazolique, elle est encore de 39,5°, alors que le pouls ne dépasse pas 90 à la minute et que l'état général est excellent. Dès que l'on arrête l'administration du sulfathiazol, la courbe thermique s'abaisse à 36,2° en moins de 36 heures; un crochet à 38,1° le lendemain soir reste isolé, l'apyrexie est réalisée et la malade est guérie. Une semaine plus tard, une angine se déclare et on prescrit une seconde cure de Cibazol. Celle-ci provoque une réaction thermique immédiate à 40°, témoignant d'une sensibilisation indiscutable au médicament. On poursuit néanmoins le traitement et la dose totale de 28 gr. 50 en neuf jours est parfaitement tolérée, l'accoutumance au médicament ayant, dans le cas particulier, succédé très rapidement à l'intolérance et à la sensibilisation.

La disparition de la fièvre d'intolérance au sulfathiazol est généralement très rapide et se fait dans la règle dans les quarante-huit heures immédiatement consécutives à l'interruption du traitement, en même temps que s'effacent l'exanthème et la conjonctivite. Les symptômes d'intolérance peuvent se prolonger plus longtemps

chez les sujets à perméabilité rénale diminuée, comme le montre la courbe, qui reproduit la réaction d'une femme de 76 ans, ancienne éthylique, dont le foie et les reins étaient manifestement insuffisants. La broncho-pneumonie dont elle était atteinte fut lentement mais régulièrement améliorée par la thérapeutique cibazolique. Le dixième jour du traitement, après 32 grammes de sulfathiazol, apparaissent des nodosités érythémateuses au-dessus des poignets et des chevilles, tandis que la température monte à $38,4^{\circ}$. On interrompt la cure, mais le lendemain, le thermomètre marque $40,2^{\circ}$ et la fièvre persiste pendant quatre jours encore. De même, l'exanthème se prolonge bien au delà du terme habituel, jusqu'à neuf jours après l'arrêt du traitement. Ce retard dans la régression des phénomènes d'intolérance, en rapport évident avec l'insuffisance des organes d'élimination et de désintoxication, n'empêcha pas l'évolution normale de la broncho-pneumonie vers la guérison.

La plupart des auteurs qui ont étudié les exanthèmes et la fièvre d'intolérance aux sulfamidés pensent que l'apparition de ces phénomènes commande l'interruption immédiate et définitive du traitement. Nous avons peu à peu abandonné cette opinion que nous avons pleinement respectée au début, et nous estimons que *le traitement au sulfathiazol peut et doit être continué, malgré l'apparition d'une fièvre et d'une éruption impressionnantes, toutes les fois que la vie du malade est encore en danger*. C'est le cas en particulier lorsqu'on traite un malade atteint d'une méningite purulente sévère ou d'une septicémie grave à streptococques ou à staphylocoques. L'histoire d'un sujet atteint d'une méningite pneumococcique suraiguë de la forme dite foudroyante, en est un exemple particulièrement démonstratif. En raison de l'intensité des doses prescrites (17 gr. le premier jour, 12 gr. les sept jours suivants), les accidents d'intolérance, consistant tout à la fois en exanthème, en fièvre et en conjonctivite, se manifestèrent avec une intensité inaccoutumée, dès le cinquième jour de traitement. Celui-ci fut néanmoins continué à doses massives et la fièvre commença à céder lorsque les quantités journalières furent abaissées à 6 grammes, pour disparaître lorsqu'elles furent inférieures à 3 grammes. Le malade fut certainement sauvé par la ténacité d'une thérapeutique qui lui infligea la dose respectable de 136 grammes de Cibazol en 14 jours.

Lorsque la situation, tout en étant sérieuse, n'est pas immédiatement menaçante, il y a avantage à interrompre le traitement, quitte à le reprendre six à dix jours plus tard. On observe alors dans la règle la réapparition des manifestations d'intolérance, qui sont souvent moins fortes à chaque reprise de traitement, indiquant que l'accoutumance entre en lutte avec la sensibilisation.

La courbe thermique suivante appartenant à une jeune fille atteinte d'endocardite streptococcique subaiguë, est caractéristique de ce *passage progressif de l'intolérance à la sensibilisation, puis à l'accoutumance*. Le traitement au sulfathiazol, entrepris à une période où la fièvre dépassait 39° , entraîna en cinq jours une rémission passagère, avec stérilisation du sang. A partir du dixième jour du traitement, la température remonta progressivement en même temps qu'apparaissait une éruption maculo-papuleuse caractéristique. La fièvre atteint 39° après 14 jours de traitement, alors que la malade a absorbé 67 grammes de Cibazol, mais l'hémoculture demeure négative, témoignant de l'action bienfaisante du médicament. On interrompt alors le traitement, ce qui entraîne la disparition immédiate de la fièvre, suivie de l'effacement rapide de l'exanthème. Cinq jours plus tard, la rémission est terminée, la température remonte spontanément à $37,8^{\circ}$ et l'hémoculture redevient positive. Le traitement au Cibazol est immédiatement repris, mais la dose de 1 gramme suffit à déclencher le retour instantané de l'éruption et de la fièvre, qui atteint $39,4^{\circ}$ en moins de douze heures. On continue néanmoins la médication, en portant progressivement les doses à 2, 3 et 6 grammes par jour. Cette augmentation des doses quotidiennes ne mit nullement obstacle à la régression de l'exanthème qui disparut complètement en sept jours, tandis que la température s'atténuait peu à peu pour ne plus

dépasser 37,6° après une dizaine de jours. On n'observa plus dans la suite aucun accident d'intolérance, bien que la malade ait reçu, dans les six mois suivants, plus de mille grammes de Cibazol, traitement grâce auquel nous espérons qu'elle est actuellement guérie de son endocardite. L'intolérance, la sensibilisation et l'accoutumance définitive au sulfathiazol s'étaient, dans le cas particulier, succédé et substitués l'un à l'autre dans l'intervalle d'une trentaine de jours.

La fièvre d'intolérance au sulfathiazol ne comporte dans la règle pas de traitement spécial, puisque la simple suppression du médicament suffit à la juguler. Si la poursuite de la thérapeutique s'avère nécessaire, en raison de la gravité de la maladie traitée, on mettra en œuvre l'une ou l'autre des nombreuses *thérapeutiques désensibilisantes* actuellement préconisées. Nous avons utilisé dans ce but le calcium en injection intraveineuse, la vitamine C, la vitamine B₁, la lactoflavine, l'acide nicotinique et divers extraits hépatiques. Ces médicaments sont recommandables en raison de leur action favorable sur l'état général, mais leur efficacité réelle sur les phénomènes toxiques eux-mêmes ne nous paraît pas démontrée. Un essai d'accoutumance par l'administration de doses progressives du médicament constitue actuellement le procédé le plus apte à désensibiliser les sujets intolérants.

—Bal—

On nous a prié d'annoncer que c'est samedi le 19 prochain qui aura lieu le bal annuel de la Fraternité Dentaire.

In Memoriam

Nous avons appris que deux de nos confrères sont morts le mois dernier, les Docteurs J. E. Préfontaine de Montréal, et J. McLaren de Matane, Qué.

En outre deux autres confrères ont perdu leur mère: les Drs Armand Fortier et Jules Tétrault.

Aux familles des éprouvés nous offrons les plus sincères condoléances du Journal et de ses lecteurs.

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